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RESPONSE TO COMMENTS SUMMARY
REVISIONS TO THE SOLID WASTE MANAGEMENT REGULATIONS
310 CMR 19.000
October, 2005

INTRODUCTION

The Department of Environmental Protection (DEP) held four public hearings on proposed revisions to the Solid Waste Management Regulations, 310 CMR 19.000, in June and July, 2004. Public notice of the hearings was printed in four newspapers of general circulation as well as in the Environmental Monitor, the Massachusetts Register, and on the DEP web site. The comment period, which was to have ended on July 16, 2004, was extended to Friday July 30, 2004 to provide additional time for submission of written comment.

The proposed revisions were made available on the DEP website and notification of the hearings was provided to a large mailing list of people including the Solid Waste Advisory Committee, facility operators, the Massachusetts Municipal Association and several environmental groups. Approximately 70 people attended the public hearings and oral testimony was provided by 16 people. Approximately 52 sets of written comments were received. A list of those submitting written comments is included on Page 2.

BACKGROUND

The Solid Waste Management Facility Regulations (solid waste regulations) were first promulgated in 1971, consisting mostly of operation and maintenance requirements for landfills. The regulations were completely rewritten to their present form and promulgated in 1990. The expanded scope of the 1990 regulations covered application requirements for all types of solid waste management facilities that require permits from the Department and included design and performance standards, operation and maintenance requirements, closure and post-closure requirements, monitoring requirements and financial assurance requirements for landfills. Minor modifications to the 1990 regulations were made in 1992, 1994 and 1998, including folding the old transfer station regulations (formerly 310 CMR 18.00) into the Solid Waste Regulations. The most recent change in 1998 added Cathode Ray Tubes (CRTs) to the list of materials banned from disposal at 310 CMR 19.017 and expanded the waste bans to transfer stations.

Since the current Solid Waste Management Facility Regulations were issued fifteen years ago, only the minor modifications noted above have been made to them. The permit application requirements, review criteria, landfill design, performance and operational standards, and Beneficial Use Determination sections have not been modified since 1990.

In the Beyond 2000 Solid Waste Master Plan, the Department committed to revising the solid waste regulations specifically to incorporate new standards for double liners for new landfill areas, add a risk evaluation criterion to both the Site Assignment Regulations, 310 CMR 16.00, (this was accomplished in June 2001), and the Solid Waste Management Facility

regulations, revise the Beneficial Use Determination (BUD) regulations and add unprocessed construction and demolition waste to the list of banned wastes.

In addition to those issues raised in the Beyond 2000 Solid Waste Master Plan, the solid waste industry asked the Department to consider eliminating the municipal waste combustor (MWC) ash monofill requirement, allowing co-disposal of MWC ash with municipal solid waste. Since 1987, first through policy and then regulation, ash from municipal waste combustors has been required to be disposed in ash-only landfills or monofills.

In addition, several sections of the regulations addressing transitional requirements for facilities that were permitted prior to 1990 are no longer needed and can now be deleted from the regulations, which will result in some streamlining of the regulations.

The six major revisions proposed for the Solid Waste Management Facility Regulations include:

- increasing the level of protection to public health, safety and the environment by revising the landfill liner standards to a double composite liner design standard;
- adding several materials normally found in construction and demolition waste to the list of materials banned from disposal;
- incorporating the same risk evaluation criterion adopted in the Site Assignment Regulations in June, 2001;
- completely revamping the Beneficial Use Determination regulations to tailor the application and review process to the category of use to which a waste material is to be put and to the level of risk posed by the use;
- eliminating the ash monofill requirement for ash landfills; and
- eliminating the sections of the regulations that are now obsolete.

RESPONSES TO COMMENTS:

Due to the number of comments received, this document does not include each comment made, but rather summarizes the major areas of comment and provides DEP's response to those comments. For some issues only one response is given that addresses several individual comments. Comments may have been paraphrased and in many cases several people made similar comments, so each specific comment has not been included.

At the same time the regulations were issued for public comment, the Department also issued three draft guidance documents for comment. This document primarily responds to comments on the solid waste regulations and does not address specific comments made on those guidance documents. Comments on those guidance documents are being addressed separately.

List of People or Organizations that Submitted Oral and/or Written Comment on the Proposed Regulations

Adam Swinson
Allied Waste Industries, Inc.
American Ref-Fuel
Associated General Contractors of Massachusetts
Berkshire Environmental Action Team
Boralex, Inc.
Bulkley, Richardson and Gelinas, LLP
Burns & Levinson on behalf of Trojan Recycling, Inc.
Cambridge Environmental Inc.
Carver-Marion-Wareham Regional Refuse Disposal District
Casella Waste Systems
Champion City
City of Chicopee, Department of Public Works
City of Fitchburg, Board of Health
City of Northamption
Clean Water Action
Construction Materials Recycling Association
Covanta Haverhill, Inc.
Dufresne-Henry, Inc.
ECOPOWER
Environmental Resource Return Corp. (ERRCO)
Franklin County Solid Waste District
Global Environmental Strategies, LLC
Gypsum Association
Haverhill Environmental League
Holmes and McGrath, Inc. Civil Engineers and Land Surveyors
Integrated Waste Services Association
Jet-A-Way, Inc.
John Kelso
Massachusetts LSP Association
Michelle DuBois
National Solid Waste Management Association – N.E. Chapter
New Bedford Waste Services
New England Organics
People for the Environment
Protecting Our Water & Environmental Resources
Representative Karyn Polito
South Shore Recycling Cooperative
Thomas A. Mackie
Tighe & Bond Consulting Engineers
Town of Barnstable, Department of Public Works
Town of Duxbury
Town of Fairhaven, Office of the Selectmen, on behalf of the Council of SEMASS Communities (COSC)

Town of Mashpee, Department of Public Works
Town of Shrewsbury, Board of Health
Town of South Hadley, Office of Selectmen
United States Gypsum Company
Walter Rosenfeld CSI on behalf of the Boston Society of Architects
Waste Management
Wheelabrator
WK MacNamera

I. General Comments

1. Regulatory Objective

Comment: Revisions to solid waste regulations should result in clearer, more concise and more easily implemented methods for maximizing environmental benefits, minimizing costs while permitting and operating solid waste facilities. Revised regulations cannot conflict with related regulations, and should clearly state the Department's expectations and how those expectations will be measured and achieved. As with any regulations, the demonstrable environmental benefit for any new requirement should be proportionate to the cost, regardless of whether the cost is borne by the public or private sector, or a combination thereof. Many of the proposed changes do not meet these objectives.

Response: In response to the many comments received, the Department has made several changes to the regulations to clarify the regulations. To that end, the Department has tried to be more concise and clarify what regulations apply to a given situation and when. While there will be disagreement over the cost of regulations vs. the benefit derived, DEP has tried to balance costs and benefits.

2. Costs to Municipalities

Comment: The Department's proposed revisions will result in unnecessary increased costs to municipalities seeking to manage their solid waste. A recent report from the Massachusetts Senate's Special Committee to Recommend Mitigation for Local Aid Cuts (Senate No. 1944) recommends several steps that should be taken to assist communities in adapting to cuts in local financial aid, including identification and suspension of non-critical environmental mandates, and relaxation of schedules for DEP-required capital projects.

Furthermore, we don't believe that the additional costs resulting from these proposed regulations and guidance documents have significant environmental benefit. Municipalities have repeatedly stated they are not opposed to requirements that provide real environmental benefit, however, they object to regulations that add costs with little environmental benefit.

Response: The Department believes that it has carefully considered the costs of new requirements with the environmental benefits of the revisions. The Department reviewed all comments carefully and as a result, eliminated some proposed revisions while moving ahead with others. For example, the Department is adopting a double liner standard, but believes that such a standard will result in greater protection of ground and surface waters at a reasonable additional cost compared to the current regulatory standards. As another example, the Department is also adopting the proposed elimination of the ash monofill requirement. This action will result in cost savings at one or more of the ash landfills, which should be passed on to municipal customers.

3. Other General Comments

Comment: All the permitted C&D facilities should have received a request for public comment. This was promised at the sub-committee meeting and was not done. The poor showing at the verbal comment meetings is proof that a lot of people have not gotten the word.

Response: In addition to public notice of the hearings printed in four newspapers of general circulation, the Environmental Monitor, The Massachusetts Register, the DEP web site, Solid Waste Advisory Committee meeting announcements, and Construction and Demolition Debris Subcommittee meeting announcements, all permitted C&D processing facilities were notified of the public hearings via e-mail announcements. Several C&D facility owners submitted written comments.

Comment: This regulation is going to impact communities. It has already impacted the Town of Barnstable. The Barnstable Transfer Station is a residential transfer station. In the last three years since this ban has been discussed the cost of disposal has gone up $21.00, and from what I am being told it will continue to go up. This transfer station has had to raise its fees to cover this increase in cost, directly impacting our residents. We have seen an increase in illegal dumping. This may be due to the increase in fees.

Response: The cost of disposal is a concern to the Department as well. There are a number of possible reasons for the Town's costs to have risen. However, specifically with regard to the proposed waste bans on C&D materials, the Department believes sufficient capacity has come on line in the state to manage the C&D materials proposed to

be banned in addition to the existing capacity to manage asphalt, brick and concrete. More capacity is being proposed. This new capacity to manage C&D materials should help to control costs for disposal of C&D and make disposal at these processing facilities less expensive than disposal in landfills. A number of facilities are on or near the Cape. Facts about C&D processing capacity include:

- 10 C&D waste processing facilities in Massachusetts, 1 C&D processing facility in New Hampshire which takes 65% of its material from Massachusetts sources (ERRCO)
- Total management capacity of over 7,000 tpd
- Total yearly capacity of approximately 2,100,000 tons per year
- 4 new facilities in the permit process that could add 1,110,000 tons per year of capacity
    - 1 permitted and under construction (Ware)
    - 3 in the permit process

Comment: The LSP Association (LSPA) strongly supports the Bureau of Waste Prevention (BWP) for modeling aspects of these regulations on the Massachusetts Contingency Plan, 310 CMR 40.0000.

However, we believe the regulation changes should go further to take advantage of an opportunity for expanding privatization to cover the Solid Waste practice area. In essence, a new Solid Waste specialty could be created within the LSP program, similar to how the PE includes specialties such as mechanical electrical and civil engineering. It is our opinion that this would be advantageous to both the regulated community and BWP in several ways.

- A privatized program can more rapidly complete environmental activities
- A privatized program provides a greater degree of flexibility to the BWP, allowing DEP staff to focus limited resources on high priority and/or problem sites/situations that require additional BWP resources
- Since the BUD provisions involve "site-specific" MCP Method 3 type risk assessments, the use of the LSP professional certification and their inherent responsibility for utilization of qualified resources will aid in standardization that will benefit BWP in its regulatory oversight position.
- The current regulations create complicated situations where a portion of the site may be an MCP site under the responsibility of an LSP, while another area, with similar issues/contaminants, may be governed under the BWP and not require use of an LSP. This creates unnecessary confusion and complication that can slow down the environmental investigation process.

Response: The Department will consider whether moving to a more privatized program makes sense for the solid waste program, and if so, which parts of the program.

The level of effort for a Beneficial Use Determination may warrant, in some but not all cases, that the applicant hire a qualified environmental professional to assist in the application process. In the future, the Department will consider issuing policies that incorporate qualified environmental professionals such as LSPs in the decision process if it will facilitate beneficial uses that are protective of public health, safety, and the environment.

Comment: The proposed changes do not address the state's shortage of solid waste disposal capacity and may indeed make it more difficult for additional capacity to come on line. The proposed regulatory changes will threaten to re-open the site assignment issue on property that is already site assigned and is proposing an expansion. This allows an opportunity for additional local opposition, and a difficult and protracted hearing process for a project that has already been studied, discussed and approved.

Site assignment modifications should not be required if a proposed expansion is to be within the previously site assigned area and if such use is not specifically prohibited by conditions in the existing site assignment.

One example is the Shrewsbury Ash Residue Landfill. The landfill is operated on 45 acres of a 170+ acre parcel. At least 15-20 years of additional ash residue disposal capacity could be designed within the existing site assigned area. However, if a site assignment modification is required and the new site assignment set backs are applied, the area remaining will not have sufficient volume to warrant the expense of developing additional capacity at this site.

Response: The Department has stated several times, and most recently in the background document for the proposed revisions, that the new site assignment setbacks would not be applied to existing facilities that received a site assignment under the older setbacks. The permit regulations include language to make this point clear.

Comment: Draft solid waste management capacity projects show that there is insufficient disposal capacity in the state to reach and maintain the solid waste master plan goal of "no net import, no net export" and that over the next

ten years, trash generation will increase and disposal capacity will decrease, moving the state even further from its goal.

DEP should calculate, as a component of its cost-benefit analysis, the value of the potential capacity that is jeopardized by the imposition of the new criteria, including set backs on proposed expansions at previously site assigned properties and the application of the Facility Impact Assessments. Lost capacity should be measured against any site-specific environmental gains that would be achieved by the application of the new criteria.

Response: As noted above, the new setbacks will not apply to facilities site assigned under the older setbacks because such facilities went through a legitimate site assignment process at that time. Therefore, there will be no loss of potential capacity on that basis. In addition, no capacity has been lost as a result of the need to conduct a Facility Impact Assessment.

Comment: We believe this package is in places confusing, contradictory and adds unnecessary cost without significant benefit. We ask the Department to delay promulgation of this package until the regulations can be fully reviewed and amended to be clear, concise, non-conflicting and cost effective.

Response: The Department has carefully considered the comments received and has made every effort to clarify specific issues on which comments were received to address this concern.

Comment: The regulations provide a high level of environmental protection. The shortcomings in the proposed revisions are not in failing to protect public health and the environment. It is in not incorporating a plan for growth and expansion within the framework of the regulations. The revisions should address the need for additional capacity and should provide a reasonable structure within which the development of that capacity can be encouraged.

Response: The regulations are not the proper place for establishing a plan for growth and expansion of capacity. The regulations establish the design and performance standards with which a facility must comply if it is to be constructed in Massachusetts. While the regulations are stringent regulations, the Department believes that is necessary to protect public health, safety and the environment. The Solid Waste Master Plan is the proper vehicle to look at issues of capacity and planning for future disposal capacity. The Department has begun a mid-term review of the 10 year Solid Waste Master Plan issued in 2000.

Comment: The regulations would benefit from confirming that the site assignment and waste management facility regulations do not extend to facilities buying and selling scrap metal as a commodity in commerce. Scrap metal businesses do not deal in refuse, but rather in a valuable commodity that they purchase and sell. Scrap metal operations must not be confused with operations that may receive solid waste and provide the service of separating metal from the waste stream. Scrap metal businesses buy scrap metal because it has value inherent to its utility.

The Department should make clear that "Secondary Material" and "Metal" as defined in the proposed regulations do not extend to scrap metal bought and sold as a useful commodity. Companies engaged in the business of buying and selling scrap metals as commodities are not refuse facilities or solid waste management facilities, irrespective of whether they handle more or less than 100 tons per day. By expressly stating in the regulations that the definitions of "Secondary Materials" and "Metal" do not encompass scrap metal bought and sold in commerce as a commodity, the Department will spare the long established and vital scrap metal industry from unnecessary burdens.

Response: While the solid waste regulations do not specifically have an exemption for scrap metal facilities, once a material has been sorted from or separated from solid waste it is no longer considered a solid waste if it is recycled or transported to a recycler and is not subject to either the Site Assignment or Solid Waste Regulations. Therefore, scrap metal that is in commerce as a commodity is not considered a solid waste if it has been collected separately or been separated from solid waste.

II. General Requirements, Procedures and Permits

1. 19.006: Definitions

Comment: Many of the definitions included in the draft regulation reference definitions contained in a number of other regulations. While this approach addresses the possible changes in those definitions at other locations, it makes the regulations much more difficult for the regulated community to follow and comply with. We recommend

including the full current definition of each term, perhaps with the caveat of "…or as may be amended by changes to CMR…. from time to time."

The definition of **"asbestos"** at 310 CMR 19.000 refers to 310 CMR 7.00, but does not provide the definition itself. This is frustrating in itself and in combination with the clarifying note in the asbestos regulation at 19.061 is very frustrating. Please quote 310 CMR 7.00 in your definition.

Response: DEP has revised the regulations to include the actual definition that is accurate now, at the time of promulgation of these regulations, and references the "host" regulation so that the reader can check on the definition if necessary.

Comment: The definition of **"commercial products"** is unclear. It defines commercial products in relation to "goods" which is not defined in the regulations, but is defined in the American Heritage Dictionary as "merchandise or wares". This definition should be made clear.

Response: The term "commercial products" was derived from the definitions of commercial and product as written in Merriam-Webster Dictionary of Law, © 1996 Merriam-Webster, Inc. Specific examples are provided to further clarify the types of materials that could be commercial products.

Comment: Construction and Demolition Processing Facility – The definition should be revised to reflect that products such as wood chips, brick chips and aggregate may be ready for end use and may not require transport to another "facility."

Response: The definition has been amended to say "or directly for reuse."

Comment: The **"destructive practices"** definition is unclear and should be reworded.

Response: The Department has modified the definition to improve clarity.

Comment: "Site Assignment" – Keep the reference to St. 1955, c. 310, s.2 so it will be clear where the authority comes from for this definition and the words "determined to be site assigned" to make it clear that this area as determined under c.310 and the regulation to be site assigned.

Response: The reference will remain in the regulation.

Comment: I would like to see the definition of **"waste handling area"** [Note: there is no definition of "waste handling area" in the regulations, but rather there is one for "handling area"] include the area where trains sit and the queuing line for the trucks. Both of these areas are most assuredly waste handling areas, as the waste is touched in these areas, transferred, and resides in these areas continually through the day.

Response: The suggested revision was not adopted. The Department, in conjunction with the Solid Waste Advisory Committee, at the time the Site Assignment regulations were drafted in 1987, made a conscious decision to define the "handling area" of a facility to be the location where trucks were unloaded. This is the location from which setbacks must be measured. While there are always concerns about the queuing of trucks, such concerns can be adequately addressed by the local boards that must site assign and issue local permits to a facility, either through conditions placed on a site assignment or through local permitting authority.

Comment: Change the definition of **"wood"** to include only untreated wood and <u>exclude</u> treated wood.

Response: The suggested revision was not adopted. The Construction and Demolition Debris Subcommittee discussed the proposed ban on construction and demolition debris wood and determined that both untreated wood and treated wood can be diverted from disposal to reuse markets.

2. 19.011: Certification and Engineer's Supervision

Comment: We would suggest that you delete the part of the first sentence that says "knowledgeable in solid waste facility design, construction and operation". The Department accepts any registered engineer as knowledgeable in solid waste facility design, even if they have never done such a thing before and have no relevant training, as long as

they have a current license. Therefore this paragraph should drop any pretense of requiring any knowledge base on the part of the engineer.

Response: DEP does not believe that the suggested change is warranted.

3. 19.014: Prohibition on Open Dumps and Dumping Grounds and Illegal Disposal of Solid Waste

Comment: It is good to see the new prohibitions added, but the means of enforcement and penalties for violations should be stated.

Response: Penalties for violations, based on the solid waste statute, c.111, s.150A, are already stated in the regulations at 310 CMR 19.082.

Comment: "Person" is not defined. Does this include municipalities, businesses, and institutions? As written, regardless of the definition, it appears that this definition violates the interstate commerce clause. Is it in effect saying that all end disposal contracts, even those out-of-state, must be "approved" by DEP? If the intent of (2) and (3) is to prevent illegal dumping, then DEP needs to reword these two sections to indicate that no person shall illegally dispose of solid waste in any place that is not permitted to accept solid waste.

Response: "Person" is already defined in the regulations. As stated in the regulations:

> "Person(s) means any individual, partnership, association, firm, company, corporation, department, agency, group, public body (including a city, town, district, county, authority, state, federal, or other governmental unit) or any other entity responsible in any way for an activity subject to 310 CMR 19.000."

This provision has been revised so that it is clear the regulation applies to dumping grounds and disposal facilities in Massachusetts.

4. 19.017: Waste Bans

General Comments

Comment: The following comment was made by two groups. IWSA questions the need for the C&D ban. At the May 27, 2004 meeting of the Solid Waste Advisory Committee, DEP distributed data on the management of solid waste in 2002. Included were figures for the actual diversion rate of C&D waste materials for 2002 and estimates of C&D waste diversion rates for 2003 and 2004. The data show that 87 percent of the C&D waste already, in 2002, is being diverted from disposal and DEP estimates that the diversion rate for C&D material in 2004 will be 88 percent. With diversion rates of nearly 90 percent without any waste ban in place, why is a waste ban on C&D waste needed, especially in light of the fiscal constraints that the Department is currently experiencing? Any additional regulatory programs will create additional costs for the Department; and any new costs, however small, must be weighed against the benefits. In this case there is insignificant, if any, benefit that can be realized from imposition of a waste ban on material that is already at a 88% diversion rate.

IWSA opposes the imposition of the C&D waste ban as unsupportable, unwarranted and unnecessary, at least at this time.

Response: In response to this comment and others received regarding the waste bans, the Department has carefully reconsidered the proposed new banned materials and looked at the proposal comprehensively. Based on current recycling rates for each of the materials, where and how materials are generated and the existing markets for those materials, DEP has decided to move forward with the waste bans for asphalt, brick, concrete, metal and wood as proposed in the public hearing draft. However, in response to comments the Department has decided to modify how the bans will be implemented.

ABC materials are a significant percentage of C&D waste and a high percentage of ABC is already recycled. Most asphalt removed from roadways goes back into new asphalt or is used as road base material. For example, Mass Highway specifications allow for some percentage of recycled asphalt pavement or RAP to be added to new asphalt products. Brick and concrete are most often crushed and used as aggregate in place of virgin stone or in some cases crushed in place and used as the base material for new road surfaces, parking lots and similar uses. The market for ABC is well established and has grown significantly over the past 10 years. Therefore, while it is clear that ABC

materials are being recycled today at high rates, DEP believes that a waste ban is still necessary to continue to ensure the reuse and recycling of ABC. However, the Department has decided that because ABC materials are already largely diverted to recycling, there is no need at this time for solid waste facilities to have to address ABC materials in their waste ban plans. Facilities will therefore not need to conduct regular, comprehensive inspections specifically for ABC materials.

DEP is going ahead with the bans on metal and wood as proposed in the draft regulations. While both metal and wood are already recovered from the waste stream, a significant fraction still ends up at disposal facilities. While some facilities, such as municipal waste combustors, recover metal pre and/or post-burn, other types of facilities do not. Some reasons for moving ahead with the bans on metal and wood include:

- Waste bans drive infrastructure investments
- With the exception of asphalt, brick, and concrete, the recycling and diversion rates for other materials such as asphalt shingles, gypsum wallboard, carpet, and ceiling tiles are much lower and present considerable opportunities for improvement and new market development. Some of these other materials will be considered for bans in the future.
- If the Commonwealth can exceed the 88% milestone for non-MSW waste reduction, it will be easier to achieve the overall 70% waste reduction goal for all waste materials because it will reduce the amount of MSW waste reduction that will need to be achieved to accomplish that goal.
- Many of the markets that have driven recent increases in C&D diversion, such as residuals for grading and shaping, fines for landfill cover, and wood for fuel, are relatively low value-added markets for which a higher value can be developed. In addition, landfill dependent markets such as fines and grading and shaping materials are expected to decline as landfill capacity in Massachusetts decreases. Furthermore, the use of C&D residuals in grading and shaping projects has resulted in odor problems, and under certain circumstances could create the potential for impacts to public health, that may limit the demand for those materials in future landfill closure projects.

Comment: The district theoretically supports the inclusion of metal, ABC, and clean wood in the waste ban regulations. However, the district has concerns about the logistics for small municipal transfer stations of separating asphalt, brick and concrete and wood waste.

Response: Transfer stations receiving loads of less than five (5) cubic yards, will not be required to conduct record keeping or comprehensive load inspections. Through discussions with municipalities in the Construction and Demolition Debris Subcommittee meetings, most municipal transfer stations don't routinely separate C&D material prior to transporting the material to another solid waste management facility. This practice can continue as proposed.

Comment: Tighe and Bond is concerned that the necessary infrastructure may not be fully available in the timeframe necessary to meet the proposed waste ban dates. Currently, there are limited viable outlets for many components of C&D other than disposal, including painted, treated, or covered concrete, wood, and gypsum. Waste bans for these materials would be premature.

Response: The Construction and Demolition Debris Subcommittee has recommended to DEP that DEP initiate a ban on the disposal of asphalt paving, brick, concrete, metal and wood because these materials are routinely diverted from disposal. Bans on these materials will go ahead as proposed, with some modifications on how they are implemented.

Comment: Reaffirm my company's support of the banning of wood from MA. Landfills. EcoPower, LLC is developing a 20 megawatt biomass generating station in MA fueled primarily with wood material received from licensed C&D processing facilities. We qualify for the sale of renewable energy credits. The plant will consume 200,000 tons of wood fuel per year. Without the proposed ban we feel that the economic feasibility of a project of this magnitude would be questionable.

Response: Support for the ban is noted.

Comment: Over 50% of the end products derived from processing at ERRCO is wood fuel that has been shipped to a number of biomass energy generation facilities in New England. There is interest in developing new sources of C&D-based wood fuel. The waste ban could help to achieve these new or expanded sources.

Response: In addition to ERRCO's interest in C&D processing infrastructure development, numerous other businesses have shown interest in establishing operations to divert C&D debris from disposal. The Department agrees with the comment.

Comment: A greater emphasis on recovering the waste ban components should help foster other recycling initiatives that can have a favorable environmental impact. For example, as a result of ERRCO processing and recovery infrastructure, we are considering the addition of facility infrastructure to recover gypsum from wallboard.

Response: DEP agrees with this comment.

Comment: Wood waste is proposed to be banned from solid waste facilities. Every such ban of materials in the waste stream costs municipalities or residents additional money. MWCs have completed extensive upgrades of their air emission control systems and should be allowed to accept and burn wood waste.

Reponse: DEP supports the proposal to exempt MWCs from the disposal ban on wood provided they maintain adequate air pollution control technologies and meet all DEP's permit requirements.

Comment: Rail Transfer Facilities – Once material hits the floor in a facility, regardless of what it is called, it should become subject to the waste ban rules as written. The outbound material from a facility must comply with the regulations. Enforcement of the rules on secondary processing facilities must be rigorous on all facilities.

Response: The Department agrees with the commenter that the waste bans should apply to all transfer stations located in Massachusetts and the regulation will require that.

Comment: We recommend DEP shift the onus of compliance with the ban from waste handling facility operators to point of generation waste producer responsibility. The volume of C&D waste direct–hauled out-of-state will surely grow. This is because the proposed ban lacks any point of generation waste producer responsibility requirement and since it only applies to C&D waste tipped at Massachusetts waste and recycling facilities. The amount of C&D waste direct hauled out-of-state will grow in the future in direct relation to the difference between the cost of trucking and out-of-state disposal versus the cost of trucking and in-state processing for the waste. Given the principles of economics and the realities of processing versus disposing of C&D waste, the ban, as currently proposed, will prove to be a significant factor in increasing the amount of C&D waste exported from Massachusetts for disposal.

Generally, we do not support waste bans. We support initiatives for source separation by generators as being preferable to additional regulation of the entities that transport, handle and dispose of waste material after it has been generated. We support increased efforts to make recycling alternatives available to construction managers at construction sites.

Response: DEP also supports initiatives for source separation by generators as preferable. For example, DEP has been encouraging source separation of C&D debris through several "case studies" which document the generator's costs savings associated with diverting C&D debris at the point of generation. These case studies are available on the DEP's Construction and Demolition web page. Several Massachusetts contractors are instituting source separation as policy to reduce overall C&D disposal costs.

DEP also enforces the solid waste regulations at solid waste management facilities. Those facilities are required to comply with the waste bans. At the same time, in anticipation of the waste bans, new C&D processing capacity has been permitted in the past few years. These facilities have established their tip fees at a competitive level with disposal facilities which should drive C&D materials to the processing facilities.

Comment: 19.017(5) – It should be clarified that submittal of a waste ban plan, or modification of an existing plan, does not constitute a permit modification under 19.039. Modify 19.017(5) by adding "Submittal or modification of a plan is not a permit modification subject to 19.039."

Response: Comments were received elsewhere that DEP should clarify what constitute "major" modifications and what constitute "minor" modifications and reduce the process and permitting criteria for minor modifications. The Department has done this by reducing the permitting process for modifications that are not expansions. The Department will require that modifications of waste ban plans be handled as one of these other modifications. While the comment was to eliminate this process for waste ban plans, the Department expends significant time and effort

reviewing and approving these plans. Therefore, the modification of the waste ban plans are appropriately handled as "minor" modifications.

Comment: The CMRA must stress that the Department has an obligation to maintain viable markets for C&D derived materials including daily cover and landfill closure materials. If a significant commitment is not maintained, the C&D industry could be significantly impacted and the ban unworkable. We ask that the Department continue to work with our industry so we can maintain and develop new markets for this highly recyclable material.

DEP must make a significant commitment to our (C&D) industry so that there are markets for banned materials. In order for JAW to comply with this ban in an economically realistic manner, we must continue to provide material to landfill closure projects. JAW commiserates with DEP's concerns about existing landfill closure practices; however, it has been proven that landfill closure projects that use these materials do not cause nuisance conditions (Woburn Landfill). If sound landfill operation practices and engineering controls are properly followed and developed, C&D fines and residuals will have a place to go. If not, the waste ban as presented will ultimately fail due to the lack of markets. We ask that DEP commit to authorizing landfill closure approvals as well as other diversionary markets in an effective manner that will allow the industry to create and diversify into new markets in the future.

Response: DEP has and will continue to assist municipalities and recycling industry businesses to divert C&D debris from disposal through Technical Assistance Grants and Recycling Industry Reimbursement Grants as funding is available, as well as continue to work with the industry to develop new markets.

Comment: Several commenters fully support the proposed new waste bans on asphalt, brick, concrete, metal and wood.

- Common sense approach to minimize the volumes of material that end up in landfills.
- C&D processing facilities provide numerous jobs. The waste bans will provide greater employment opportunity and stability at new or expanded processing facilities.
- C&D processing facilities pay a significant host fee to the town in which they are located.

Response: The recommendation to initiate a ban on disposal on asphalt paving, brick, concrete, metal and wood is a result of numerous meetings and discussions with the Construction and Demolition Debris Subcommittee, which is comprised of over 150 stakeholders representing architects, engineers, building owners, contractors, haulers, C&D processors, landfill owners, transfer station owners, municipalities, environmental groups, trade associations, law firms, and consultants.

Comment: Several comments were received on the following issue.

Several towns were concerned that although they receive individual loads of wood from local residents and contractors which are under the regulatory limit of five cubic yards, when accumulated in roll-off boxes at the transfer station, they may often reach beyond the 20% wood allowable in an individual load, thus resulting in a problem both for the landfill operator and the Town. If DEP's intent was to exempt homeowners and small contractors from these bans, then it is essential to find a better way. These "incidental" amounts may end up comprising an amount that the Department deems noncompliant with waste ban requirements at the landfill or MWC. The disposal facility is compelled to reject the load. This issue continues to need clarification.

Response: DEP will amend its proposed guidance document to state that loads coming to solid waste facilities from small transfer stations that only handle waste delivered in less than 5 cu. yd. quantities do not need to inspect the roll-off from the transfer station for asphalt pavement, brick, concrete, metal or wood. These facilities will continue to inspect for other restricted materials as required in 310 CMR 19.017.

Comment: The standard for a "de minimus" amount should be reduced from 20% for all asphalt, brick, concrete and wood to 5% of any one of those materials. The de minimus standards do not truly exclude household and municipal loads when they are consolidated into larger containers (roll-offs).

Response: The Department believes that 20% is more easily identified by a person conducting waste ban monitoring at a facility than 5%. This was discussed with the C&D subcommittee. The nature of construction and demolition debris material prohibits the efficient separation of all material. An example is wood generated during renovation or demolition activities. It may cause safety concerns or be cost prohibitive to efficiently remove all wood in a mixed C&D load if the wood is attached to other material such as gypsum wallboard or carpet.

Comment: Municipal facilities will be unable to easily separate the banned waste and consolidate it in quantities that can be hauled and recycled. For example, a small municipal transfer station could pile up ABC but would then have to find a way to haul it to a processor. It could take a facility a year or more to accumulate enough quanity to make shipment of ABC or wood waste economically feasible.

Response: If municipal facilities are receiving loads exclusively from vehicles with less than five (5) cubic yards, they will not be required to conduct record keeping or comprehensive load inspections. Therefore, there is no need for these facilities to separate the restricted material. Through discussions with municipalities in the Construction and Demolition Debris Subcommittee meetings, most municipal transfer stations don't routinely separate C&D material prior to transporting the material to another solid waste management facility. This practice can continue as proposed for the small transfer stations.

Comment: If all wood is banned, it is probable that facilities will provide one dumpster for all wood thus combining clean, re-usable wood with old wood possibly containing lead, and treated wood containing chemical compounds. The combined materials would then be managed according to the lowest common denominator. There is a best solution for each of these types of wood, and it is not the same.

Response: The ban is on the disposal of wood. During the Construction and Demolition Debris Subcommittee meetings, stakeholders interested in receiving wood have discussed various "tip fees", including a lower tip fee for clean wood vs. treated wood. This type of tip fee structure is likely to drive front-end separation of clean wood from dirty wood effectively with the result that clean wood will be collected separately from dirty wood.

Comment: Agree that C&D processing and disposal facilities comply with the existing ban on cardboard effective December 31, 2003.

Response: DEP agrees with this comment.

Comment: One concern is the potential for DEP to provide an economic advantage to those entities that transport unprocessed C&D materials to remote out-of-state disposal sites. The waste ban would be inequitable and unacceptable to the extent that it allows such transporters to avoid investment in waste handling and processing facilities or to avoid the expense of operating and maintaining those facilities. WMMA has already invested more than $15 million in C&D waste handling and processing facilities in Massachusetts.

Response: DEP will require all in-state Solid Waste Management Facilities, including those that transfer waste via rail, to submit Waste Ban Compliance Plans addressing ongoing waste stream monitoring of all incoming loads, comprehensive load inspections, facility response to failed loads, and other compliance plan elements. The proposed guidance document accompanying the regulations states, "In the case of restricted construction and demolition debris, restricted material may be transferred to facilities that have an approved Waste Ban Compliance Plan, or can demonstrate that they will not accept restricted material for disposal, or further transfer for disposal". Therefore, a Massachusetts transfer station could meet the waste ban by transferring waste to an out-of-state processing facility but not to an out-of-state landfill.

Comment: The proposed regulations also unfairly discriminate against companies with transfer stations in favor of companies that transport completely unprocessed demolition debris directly out-of-state. A company that brings demolition debris to an in-state transfer station before sending out-of-state should not be subject to much more burdensome requirements than a company that takes demolition debris directly to an out of state disposal site.

Response: DEP recognizes that some restricted construction and demolition debris material can be hauled directly from a point of generation in Massachusetts to a disposal facility out of state. Waste that is direct-hauled to an out-of-state facility is outside of DEP's jurisdiction, even if the waste does not meet the waste bans.

Comment: DEP's arguments regarding its ability to regulate or restrict the ultimate destinations of waste materials are untested in the courts as to whether they represent an unacceptable intrusion on interstate commerce.

Response: DEP is not restricting interstate commerce and is making no effort to control where waste goes if transported out of state.

Comment: Several comments were received on the following issue.

The Department has adopted a "no acceptable quantities" criteria for several waste ban materials. This is a standard that is literally impossible to achieve, and it will continue to create routine, unavoidable and unnecessary noncompliance at all solid waste facilities. The Department must acknowledge that a de minimus level of banned materials will persist in the waste stream, even when facilities operated with best management practices. "Zero Tolerance" is not an achievable standard. Change 19.017(3)(a) to say "No person shall knowingly dispose……" etc.

Response: The proposed amendments to the Solid Waste Management Facility Regulations propose a twenty (20) percent cumulative level of unacceptable levels of metal and wood per load for the newly banned materials. No change to the guidance document is proposed for large, easily identifiable items such as white goods and CRTs.

Comment: In addition to supporting the currently proposed bans, we believe that DEP should in the future consider excluding from landfills other C&D products which can be recycled, such as carpet, gypsum wallboard, and asphalt shingles, as markets for these materials develop.

Response: The Department, in conjunction with the C&D Subcommittee, is already examining the feasibility of banning other materials commonly found in C&D waste. Any future expansion of the waste bans will require a new proposed regulation and associated public hearings.

Ban on Wood

Comment: Several commenters object to the proposed ban on "dirty" C&D wood for a number of reasons outlined below:

- Banning all wood at this time is premature.
- "Dirty" wood contains a variety of toxic substances such as arsenic, lead, chromium, and creosote, as well as paint, varnish and glue
- No safe use for this type of wood has been identified and banning from safe disposal in a double lined landfill poses a great environmental risk
- Wood burning facilities, such as the ones in Maine, are currently prohibited from accepting treated wood by the Maine air regulations. The facilities were not designed to burn this type of material.
- There is no viable end market for "dirty" wood
- BUD standards are still being developed for use of clean wood. No such standards are even in the works for dirty wood.
- It is currently being used for grading and shaping of unlined landfills during the capping process. This is a short term solution with finite application and not preferable to burying it safely in a double lined landfill
- Increased export of C&D materials is possible in Western Mass. because sufficient processing capacity does not now exist
- There is an abundance of scientific data indicating that CCA-treated wood should not be chipped, burned, or used as mulch. EPA, Florida and other states recommend disposal only in a lined landfill. Treated wood should not be considered for a beneficial use determination (BUD).
- Two attached documents refer to studies that only 5-11% of CCA-treated wood is needed in wood fuel for the ash to fail TCLP. With 10.7% CCA-treated wood, "the ash exceeded TCLP limits for arsenic by a factor of at least 26."
- There are no current processing facilities or end markets for dirty wood. Boralex is prohibited from accepting any treated wood. It should not be used as alternative cover at landfills because grinding it releases more of the toxicity. It should not be used as mulch. MSW burners do not want it because it will increase the risk of their ash becoming hazardous.

Response: If the bans go into effect for asphalt pavement, brick, concrete, metal and wood, the Department believes the there will be sufficient capacity to manage the materials. Capacity for mixed demolition debris management will include:

- 10 C&D waste processing facilities in Massachusetts, 1 C&D processing facility in New Hampshire which takes 65% of its material from Massachusetts sources (ERRCO)
- Total management capacity of over 7,000 tpd
- Total yearly capacity of approximately 2,100,000 tons per year
- 4 new facilities coming on line that will add 1,110,000 tons per year of capacity
    - 1 permitted and under construction (Ware)
    - 3 in the permit process

With regard to markets, the Construction and Demolition Debris Subcommittee evaluated and discussed the recommendation to initiate the disposal bans and the question of what is the current disposition of each material. Currently, treated wood is used as a component for alternative daily cover or grading and shaping material at landfill closure projects, which is viewed as preferable to simple disposal of this material. Both of these applications are regulated as Beneficial Use Determinations (BUDs). As a requirement of the BUD, producers of this material must conduct RCRA sampling and analysis periodically.

In addition, DEP believes that wood destined for use as a boiler fuel can be safely burned. Facilities proposing to burn wood that may be contaminated will be required to conduct a toxics analysis and install the proper air pollution control equipment, similar to the equipment installed on the Massachusetts MWCs. Currently, incidental quantities of treated wood are combusted in Municipal Waste Combustors (MWCs). MWCs have installed proper air pollution control technologies and conduct routine sampling and analysis for metals including copper, chromium, arsenic and lead. Any new C&D wood-to-energy facilities will be required to meet DEP's air permit requirements at 310 CMR 7.00.

Comment: The interest that Boralex has with the proposed amendment is with the separated wood materials. We are a combustor of wood residues with four thermal power facilities located in Maine, two of which are licensed to combust construction and demolition wood residue by the Maine Department of Environmental Protection. Boralex is very proactive with environmental regulations concerning these wood-burning facilities. Close monitoring and reporting to the proper regulatory agencies of emissions and meeting the standards that are set by the regulatory agencies are taken very seriously. Presently, the two facilities mentioned are combusting construction and demolition wood at an annual volume of approximately 350,000 green short tons. The maximum volume that we are presently allowed to combust by regulation on an annual basis would be approximately 450,000 green short tons. This C&D material is then mixed with other wood residues like forest derived wood chips, ground up stumps, brush and sawmill derived wood residues. Due to the intense competition with other wood combustors and bark-mulch companies who utilize the non C&D wood material, Boralex must maintain a C&D wood residue program in order to operate the facilities in Maine.

Response: The comment is noted.

Comment: Trojan Recycling, Inc. would be adversely impacted by the Department's proposed ban on the disposal or transfer for disposal of wood at landfills. Trojan effectively removes asphalt, brick, concrete, cardboard and metal from the materials it handles. However, requiring it to remove waste wood from incoming loads, especially demolition debris wood, would impose significant costs without justification. We are aware of no other state that bans transfer stations from accepting wood for disposal. Current recycling and reuse options for C&D wood are extremely limited.

Response: The ban on wood will remain in the Waste Bans. The effective date of the ban will be 9 months after the date of promulgation of the regulation which will provide significant time for Trojan to determine how it will come into compliance with the ban as it modifies its waste ban plan to address the new materials. The Department disagrees that recycling and reuse options for C&D wood are extremely limited. The wood generated now from the C&D processors in Massachusetts is being used both as wood-fired boiler fuel and as a component part of grading and shaping material, among other uses. The ban on wood is an important tool for attracting other facilities into Massachusetts that will use C&D wood and reduce the amount of material needing to go to out-of-state users.

Comment: We have been informed that the Department intends to interpret the proposed wood ban to apply to the disposal of wood at landfills located outside of the Commonwealth. Such an attempt to regulate how waste is handled outside of Massachusetts violates provisions of the Commerce Clause of the Constitution.

Response: The Department is not regulating how waste that leaves the state is handled, nor saying that waste cannot be either imported or exported from Massachusetts. What the Department does regulate, however, are solid waste facilities located in Massachusetts. The waste bans apply to all landfills, solid waste combustion facilities and waste handling facilities located in the state and require that banned materials not be disposed or transferred for disposal. Each waste management facility is required to have a waste ban plan that describes how the facility will meet the waste bans.

Comment: We propose that the Regulations require C&D waste material containing wood to be processed in-state before being loaded into any container or vehicle capable of long-distance transport. Exemptions would be limited to:

- Allow loads to be transferred from in-state transfer stations to out-of-state processing facilities in order to take advantage of the scale of economies of regional processing facilities
- Allow loads to be transferred from in-state transfer stations to out-of-state processing facilities that comply by permit with DEP processing requirements. As part of the review of in-state transfer station waste ban plans, DEP should review the permit of out-of-state receiving facilities for consistency with applicable processing requirements. In-state transfer stations must also provide regular documentation regarding processing quantities achieved at the out-of-state facility.

Response: The waste bans apply to all in-state solid waste facilities. However, where solid waste is directly hauled from the site of generation to an out-of-state disposal facility without going to an in-state facility, the material may be disposed without complying with the waste bans because the solid waste is not being sent to a Massachusetts transfer or disposal facility.

In a facility's waste ban plan, which describes how the facility will comply with the waste bans, it would be acceptable to indicate that material is transferred to an out-of-state C&D processing facility. This would be one example of a way for a handling facility to comply with the waste bans.

Municipal Waste Combustor Exemption from the Ban on Wood

Comment: Several comments supported the proposal to exempt municipal waste combustors from the ban on C&D wood. Some of the reasons noted include:

- Waste wood is currently combusted at MWCs with no adverse impact on emissions or ash quality. MWCs must continuously monitor numerous parameters to demonstrate compliance and must conduct extensive emissions testing every nine months.
- MWC facilities have lower emissions than wood-fired biomass facilities
- MWC facilities have installed state-of-the-art emissions control systems which are more advanced than many wood-fired facilities.
- Using waste wood to produce electricity reduces the release of greenhouse gases, notably methane from decomposition of wood, which is 23 times more potent than CO_2 as a greenhouse gas.
- Continuing to receive and combust waste wood at MWC facilities will not decrease in-state disposal capacity. It is not anticipated that MWCs will significantly increase the amount of wood they receive since that would impact the heat input to the boilers. Furthermore, it is not in the financial best interests of MWCs to accept more than an incidental amount of waste wood.

Emissions Comparison (submitted in a comment)
(Reported in lbs per megawatt hour generated)[1]

Pollutant	Waste-to-Energy [2]	Wood Waste
Particulate	0.085	0.62
NOx	5.6	4.4
SO2	0.49	0.50
HCl	0.32	0.38
CO	1.0	12
Dioxins/Furans	0.009E –05	3.34E –05
Total HAPs [3]	Non-detect	0.68
NMOC	0.01[4]	Included in Total HAPs Value
Benzene	Non-detect	0.084
Toluene	Non-detect	0.018

Lead	0.00058	0.0010
Mercury	0.00027	0.000070
Cadmium	0.000040	0.000082

(1) Emission factors are derived from EPA's AP-42 document unless otherwise noted.
(2) WTE data from the EPA database.
(3) The Hazardous Air Pollutants (HAPs) are those listed in AP-42 for wood combustion. Other HAPs such as HCl are not included in this number because they are reported separately.
(4) An assumed value of 1 ppmdv at 7% O2 is used for WTE facilities as being a worst-case average value. NMOC typically are not detected when tested.

Response: The Department supports the exemption for MWCs on the disposal ban on C&D wood. MWCs currently accept small amounts of C&D Wood mixed in with MSW, and based on discussions with MWC operators, it is not anticipated that there will be any significant increase in the amounts received through the ban exemption. The boilers are physically limited in the amount of heat input (Btu/hour) they can accept. Since C&D wood has a higher heating value (Btu/lb) than MSW, the more wood burned, the less MSW that can be accepted and processed at the MWC.

MWCs may need wood when combusting wet loads resulting from snow storms and/or food waste. However, continuous combustion of wood would not be economical.

Air emissions are monitored to demonstrate that the MWCs are in compliance with strict air quality permit requirements. Among the metals being monitored are copper, arsenic, chromium and lead, that may be present in the C&D wood stream.

The ash generated from MWCs is properly disposed of in permitted lined landfills.

Comment: IWSA appreciates and supports the Department's policy of exempting MWCs from the wood ban. MWCs should also be exempt from ferrous metals waste ban, since all of the facilities in the state have ferrous recovery systems. The exemption should extend to nonferrous (aluminum, etc.) and C&D bans, provided a MWC can demonstrate that material received at the facility is ultimately recycled/reused.

19.017(3) and 19.017(5) – These sections should clearly acknowledge that combustion facilities in Massachusetts actually recycle many of the banned materials that are accepted. Therefore, such facilities should be exempt from several of the waste bans if they can demonstrate that these materials are recycled if they are accepted. For example, facilities recover pre and post-incineration ferrous and non-ferrous metals and glass, asphalt, brick and concrete ultimately becomes part of the bottom ash, some of which is used at landfills as daily cover, gas vent material and as grading and shaping material.

"Metal" is a new definition. Furthermore, "metal" is included in the proposed waste bans. Covanta respectfully requests that the waste ban be changed to: "Ban on disposal or transfer for disposal at landfills only". MWC facilities are equipped with very effective post combustion metal recovery systems that allow metal (ferrous and nonferrous) to be recovered and sent out for recycling. Therefore, processing of "metal", as defined in the regulations, at a MWC does not equate to "disposal" as it does at a landfill.

Response: The Department agrees that MWCs capture significant quantities of metals through pre and post-burn metal recovery and that this is a viable method to recycle metal. However, the Department is going to keep the ban on metal as stated to encourage separation and collection of metal prior to disposal as much as possible, but will allow MWCs to meet the ban with their current pre and post-burn separation techniques.

One of the major reasons for the waste bans is to encourage the diversion of banned wastes from solid waste prior to disposal. Waste that is diverted upstream of a waste disposal facility reduces the amount that must be managed by the disposal facility. Banning metal from disposal should result in better management of metals by generators and less metal being disposed at MWCs and will therefore preserve that capacity for other waste materials that need to be disposed.

Comment: Several commenters oppose the proposal to exempt municipal waste combustors from the ban on C&D wood. Municipal waste combustors should not be exempted from the C&D waste ban. Reasons given include:

- Unless C&D waste was already processed, a waste incinerator would have an unfair advantage over all other types of facilities.

- An exemption could hurt the existing and future C&D processing facility infrastructure and could significantly hinder the potential for developing a wood-fired facility in Massachusetts that is a necessary component that will complement our existing infrastructure.
- One purpose of the bans is to prevent scarce disposal capacity from being used for disposal of recyclable materials and since wood is recyclable it should not be combusted.
- If MWCs are exempted, it would imply that incineration of non-processed waste materials is comparable to recycling and/or diversion, which is not currently the case.

In JAW's opinion, there should not be an exemption, which would allow MWCs to accept mixed C&D materials for energy production unless that material was already processed and would be considered "biomass". Our opinion is based upon the following:

- If DEP were to exempt MWCs from compliance with this ban (at least the act of processing and separating), it would imply that incineration of the non-processed waste stream is comparable to recycling. Would this then classify a MWC as a recycling market?
- MWCs are regulated under the same solid waste regulations that we are. Based on this fact, MWCs should not gain an advantage over other facilities.
- MWCs would likely not want this material in the first place due to the fact that the Btu content of C&D is almost twice that of MSW, which means it would reduce their need for fuel, which in this case is waste. However, in time of fluctuating market conditions, weather and a lack of MSW, these MWCs may use "spot market" pricing to gather fuel. As such this could significantly jeopardize viability of C&D processing facilities.
- Lastly, it is JAW's opinion that if MWCs are exempt from "processing" out the biomass, it will reduce the chances of having a wood fueled energy facility within the Commonwealth, which is necessary to ensure that C&D facilities have an economical means to handle the wood that will be extracted from the C&D waste stream.

Response: The draft regulations were not proposing to allow MWCs to accept mixed loads of C&D. The exemption would only be for the wood fraction. DEP will maintain the exemption from the ban on wood for MWC facilities. The Department does not believe MWCs will seek loads of C&D wood because C&D wood has a higher heating value than MSW. If more wood is burned then less MSW could be burned, which would therefore reduce the income from the tip fees for the MSW. Furthermore, a facility's air pollution control equipment is designed to handle the contaminants that could be generated by the waste wood. These facilities burn C&D wood that comes in to the facility currently.

Comment: MWCs should be exempt from the need to modify existing approved waste ban compliance plans to include the newly banned materials. Other than wood, the newly banned materials are all either non-combustible materials that are already banned from MWCs as unacceptable wastes (asphalt pavement, brick, concrete, and scrap metal) or are recovered from ash after combustion (other metal).

Response: While DEP will be going forward with the bans on asphalt, brick, concrete, metal and wood, the Department has decided that given the current recycling rate of asphalt, brick and concrete (ABC), at this time facilities will not need to address ABC in their waste ban plans. Should recycling rates for ABC drop in the future the Department may revisit this decision. The Department does believe that including ABC in the waste bans sends a clear message to generators of ABC that the material needs to be diverted to recycling and beneficial uses rather than be disposed.

Effective Date:

Comment: The effective date [9 months] for the waste bans is not necessary and should be accelerated. Since this waste ban development process has been in effect for years, the timeline can be reduced and there should be no exceptions to the effective date.

Several commenters indicated that they support the proposed effective date for the newly banned materials being 9 months after the final promulgation date of the regulations, recognizing that some time is need for facilities to update their waste ban plans and for the Department to review and approve those plans.

- One commenter indicated that there should be **NO** exceptions.
- The waste ban should be administered fairly and equitably throughout the C&D industry.

- One commenter indicated that they support an effective date of 12 months after the effective date of the regulations, which would allow for municipalities to receive bids for hauling and disposal of the additional materials, identify new logistics for source separation, and educate residents and businesses about the additional banned materials.

Response: DEP supports making the effective date of the waste bans nine months after the promulgation of the regulations. Most facilities affected by this amendment routinely divert asphalt paving, brick, concrete, metal and wood from disposal. The nine-month time frame will allow ample time for facilities to modify, and DEP to approve, waste ban compliance plans.

Transition Period:

Comments:

- Several comments were received that do not support a transition period beyond the 9 month period to the effective date from when the regulations are promulgated. Commenters argue that processors have been handling these materials daily and it is apparent that markets exist. In addition, processing capacity in Massachusetts is currently adequate.
- The DEP should not establish a transition period for compliance with this ban. Any DEP C&D waste ban should be implemented uniformly, across-the-board, like the other DEP waste bans implemented to date. Further, the DEP needs to retain failsafe waiver authority for disposal of a C&D waste ban item (or items) in cases of severe, unexpected or exceptional disruptions with the markets that absorb banned item(s) from disposal.
- The district also recommends a six-month transition period, at a minimum, to allow facilities to come into compliance with the new regulations.
- The Department should consider that the actual start date would trigger enforcement at a scaled down "de minimus quantity" measurement starting at "TBD%" going to successfully lower % acceptable levels over a 3 year period. We would encourage DEP to work with industry to develop these threshold levels before the start date.
- Understanding that some C&D waste handling facilities have expressed concern that a transition period may be needed to come into compliance with the new waste bans once they become effective, AGC would support a transition period, perhaps up to a year, for each of the named banned materials in order for the marketplace to develop and establish available outlets and markets for the newly recycled materials and to ensure that the handling facilities have the correct processes in place.
- It is JAW's opinion that a phased approach is best to ensure that ALL facilities will be held to the same standard. By having a "walk before we run" attitude, we as an industry may better handle the necessary infrastructure changes that will be certainly impact us. An abrupt change may cause significant turmoil, reduce relied upon outlets/markets and cause a significant economic change within our industry.
- We recommend that DEP establish a defined time frame of one year for each facility to come into compliance with waste bans, but allow a facility to petition DEP for an extension on a showing that the market is not fully in place; in which case DEP should only extend the compliance deadline for any particular material long enough for markets to come into place.

Response: Given the length of time the ban on C&D materials has been under consideration (it was first proposed in the 2000 Solid Waste Master Plan), the fact that asphalt, brick and concrete will not be included for reasons given elsewhere in this document, and the 9 month period after the regulations are promulgated before the bans take effect, the Department does not believe any more time is necessary for facilities to be able to comply with the new bans.

Ban on Gypsum:

Comments: Many commenters indicated that gypsum should not be banned at this time, or at least until there is an end use market.

- There are no viable outlets for dirty gypsum other than disposal.
- We do not believe that it is gypsum board that is causing the H2S odor problem.
- The economic impact of a possible ban has not been fully considered.
- A ban will invite unmanaged dumping of gypsum scrap.
- In conjunction with Mass. DEP, the gypsum industry is working toward a solution; therefore, contemplating a ban on gypsum board disposal at this time is premature. Given the cooperative nature of

this effort, it makes no sense to potentially overturn the program before it has been given the opportunity to resolve the situation placed before it.

- U.S. Gypsum has committed to recycling upwards of 18,000 tons of scrap wallboard annually commencing in the third quarter of 2005. It is somewhat incongruent for the MDEP to now suggest banning wallboard from landfills while simultaneously encouraging manufacturers to engage in a voluntary recycling program. It is appropriate to allow this one process to evolve before seeking to call for another. The materials now in queue to be banned from landfills have, by in large, already evolved market driven recycling options. MDEP should allow the same to occur for gypsum materials.
- Strongly opposes any ban in the immediate future of gypsum wallboard until markets are established and facilities are in place to readily accept (both clean and used) gypsum. AGC even more strongly opposes mandatory source separation of gypsum wallboard (or any material) at the point of generation at commercial construction sites for the same reason and because it is not practical on tight construction sites to handle source separation.

We strongly support a ban on disposal of gypsum wallboard, which has been the source of odor complaints at landfills – and because gypsum is recyclable.

Response: DEP will postpone a decision to consider amending 310 CMR 19.017 to ban the disposal of gypsum wallboard waste. Instead, DEP will continue supporting the efforts of the C&D Subcommittee and Gypsum workgroup stakeholders to encourage the recycling/reuse of gypsum wallboard waste.

Comments: DEP should proceed with a ban on asphalt shingles rather than gypsum. There are already vendors that are recycling this and with the weight of asphalt shingles, the goal of 88% recycling would be easily accomplished.

Response: The Department will continue to work with the C&D waste subcommittee on other potential waste bans and will consider asphalt shingles in the future.

Comments: With the Commonwealth being perhaps the largest purchaser of construction services – the $700 million annual construction budget for DCAM, the newly proposed $700 million court house bond bill, and the recent passing in the House of a $550 million package for a new school building assistance program to accommodate the construction and renovation of 420 public schools on the waiting list – the Commonwealth should look at requiring a pilot program for source separation at its OWN public construction sites first, before requiring mandatory source separation in the private sector.

Response: C&D waste resulting from the public projects mentioned above will be subject to the same waste bans as any other project at solid waste facilities.

Comment: We do not understand why the DEP is suggesting it may be willing to consider adopting a point of generation waste producer responsibility based rule for gypsum while saying it cannot (or will not) do so for other items in the C&D waste stream like bricks, asphalt and wood.

Response: DEP will continue its efforts with the industries that use and reuse banned materials to encourage recycling of these items.

5. 19.020 – 19.037: Permit Requirements for Solid Waste Management

Comment: 19.020-19.038 - The district supports DEP's proposed revisions to these sections.

Response: Support for the proposed changes so noted.

Comment: 310 CMR 19.030(3)(c)2. requires that an Application for a Solid Waste Management Facility Permit application have a plan that will have **a recycling and composting plan for landfills and combustion facilities accepting municipal solid waste or construction and demolition wastes.** We believe this requirement should not be limited to landfills and combustion facilities. Transfer stations need to prove to the Department that they will, in fact, be separating waste for recycling – not just loading it on to train cars to be landfilled out of state.

Response: The Department is relying on the waste bans as the means to ensure that transfer stations direct materials to recycling. The Waste Ban regulations were previously amended to apply the waste bans to transfer stations,

effective April 1, 2000. Previously the waste bans did not apply to transfer stations, applying only to landfills and municipal waste combustors. Because the waste bans are the means to ensure recycling, the Department has decided to eliminate the 25% rule from the regulations.

Comment: 19.030(3)(c)2. and 19.038(2)(e) – These sections should be revised to reflect the uncertainty and the changing nature of the geographic areas served by individual facilities. If a disposal facility has a well-developed waste ban compliance program, and the facility does not accept compostable or recyclable materials for processing or disposal, the need for recycling and composting plans are redundant.

The goals of the waste bans would be better served by replacing the recycling and composting plan requirements and the recycling criteria with a requirement to document that municipalities served by the facility on a regular basis have adequate recycling and composting programs in place. This documentation of communities' recycling rates is already well developed and available to DEP and the public. There should be no requirement to duplicate efforts to obtain such information. It seems that the requirement for the recycling criteria is a carryover from requirements established before waste bans were enacted… Recycling and disposal have become much more separated operating units, and the regulations should be revised to reflect these changes in the industry.

Response: The Department agrees that the 25% recycling rule and the waste bans are somewhat redundant. Recently, the Department has focused on implementing the waste bans and ensuring compliance with the waste bans as an important means to ensure that readily recyclable materials are removed from the waste stream prior to disposal. For a number of reasons (recycling rates exceed 25% in Massachusetts; the 25% recycling rule and the waste bans are redundant; the recycling market and grant programs drive recycling; and because the 25% rule no longer serves any useful purpose) DEP will eliminate the 25% recycling rule from the regulations. In addition, DEP will replace the permit application requirement for a 25% recycling plan with a reference to the requirement to submit a waste ban compliance plan.

Comment: 19.030(3)(c)2. - We support the proposed changes to 19.030(3)(c)2.

Response: Comment so noted.

Comment: 19.031(2): Review of Applications for Completeness: The Department proposes to eliminate the 30 day review period. Covanta strongly opposes this change. Timely review by the Department is imperative to ensure timely action is taken by facilities to address issues.

Response: The Department's Fees regulations, 310 CMR 4.00, establish timelines for completeness review and technical review of all permit applications. The review periods are established in those regulations. The Fees regulations have a 30-day review period for completeness for all solid waste permit applications.

Comment: 19.032(1): Procedure for Review of Applications for New Facilities or Major Expansions. The language is confusing. Covanta recommends the following language:

> (1) Applicability. The Department shall review applications submitted pursuant to 310 CMR 19.000, using either the permit review procedures set forth at 310 CMR 19.032 through 19.036 (Review of Applications for New Facilities or Major Expansions) or the procedures set forth at 310 CMR 19.037 (Review Procedure for Permit Modifications, Permit Renewals and other Approvals).

Response: The paragraph was modified as suggested, but referring to the revised titles for each section of the regulations.

Comment: 19.032(d) - We oppose the proposed change to 19.032(d), which would require applications for landfill vertical expansions to undergo the draft permit review process rather than the provisional permit review process. DEP should retain the discretion to utilize either process for a landfill vertical expansion.

Response: The suggested changes were not made to the regulation. The Department believes that all expansions of landfills should be subject to the formal public review and comment process hat is provided in the draft permit review process.

Comment: 19.032(1) – This section refers to Section 19.037 as the "provisional permit review process". However, the term "provisional" has been removed. This should be made consistent.

Response: The suggested change was made to the regulations.

Comment: 19.032(1)(f) – Delete this section. Subjecting "such other applications as the Department deems appropriate" to the entire permit review process is ambiguous.

Response: The Department did not propose any modification to (f) and no change has been made. (f) is in the regulation to cover possible unanticipated applications that are not specifically addressed in this section of the regulation.

Comment: 19.033 – Several commenters indicated that they strongly support sending notice to the Abutting Boards of Health.

Response: The Abutting Board of Health language results from an amendment to C.111, s.150A. The change was previously made to the Site Assignment Regulations and is now being added to the permit regulations to make the two sets of regulations consistent on this issue.

Comment: 19.033(1)(c) – Under the proposed changes to 19.033 please clarify the length of the comment period for public notices issued pursuant to 310 CMR 19.033(1)(c). Covanta recommends the following language be added to 19.033:

> For public notices issued pursuant to 310 CMR 19.033(1)(c), the comment period shall begin on the date the public notice is first published in a newspaper as specified at 310 CMR 19.033(4)(b) or on a later date specified in the public notice.

Response: The suggested change was made to the regulations. In addition, a modification was made to clarify that a public comment period has to be at least 30 days long.

Comment: DEP should include enhanced public notice requirements for site assignment applications and applications for DEP Authorizations to Construct and Operate similar to bylaws that have been adopted in Cohasset, Abington, Carver, and Saugus which require the following enhanced public notice on the filing of a site assignment application. (7 additional proposed requirements were submitted with this comment).

Response: The regulations have not been amended to adopt the enhanced public notice requirements suggested. The solid waste statute has established the basic public notice requirements for both site assignment and permit applications, which the Department believes to be adequate. Furthermore, the Fees regulations provide additional formal public comment periods on applications. Towns may impose further public notice requirements for applications submitted within their jurisdiction.

Comment: 19.035 – Public Hearing. Commenters opposed changing "shall" to "may" with regard to holding a public hearing on a solid waste permit. Commenters believe it is crucial to hold public hearings on solid waste permits and to have the requirement of a public hearing for public input throughout every step of the way of a solid waste project, and that this should not be made optional at DEP's discretion.

Response: The Department will retain "shall" in this section. It should be noted that a public hearing is not required on a draft permit by statute as is the case with site assignments. However, the solid waste regulations were drafted to provide the opportunity to hold a hearing where there was sufficient interest without mandating a hearing for every permit, given that many permit modifications are for minor issues.

Comment: DEP should also include 2 new conditions to require a public hearing:

- 10 residents of the host community and/or abutting community request a hearing
- the Department prepares a draft decision to grant a permit.

Response: These two suggestions were not incorporated into the regulations. First, the existing language in the regulations sufficiently covers these two situations. Second, the Department will hold a public hearing if there is sufficient public interest, but DEP does not want to have to hold a hearing for minor permit modifications, particularly where there will be little, if any, impact on people or the environment, or where there is little interest.

Comment: 19.037(1)(f) – Delete this section. The Department has proposed to *add* this vague requirement, which seems clearly inconsistent with the overall goal of regulatory clarity.

Response: This section was not deleted. This paragraph defines certain permit types that can go through a more streamlined permit review process and includes "such other applications as the Department deems appropriate." This was done to cover possible types of permits or permitting situations that could arise that have not been foreseen by the Department.

6. 19.038: Applicability and Review Criteria for a Permit or Permit Modification

Comment: Several comments were received on the following issue:

The new site assignment criteria **must not be applied retroactively** to landfill expansions on existing site-assigned property. Application of the new criteria could preclude expansion projects that would create millions of cubic yards of capacity at landfill sites across Massachusetts on property that local communities have already determined to be suitable for use as landfill disposal capacity.

- DEP's recent practice to require site assignment modifications for proposals that include expansions of existing facilities beyond currently approved limits is a dangerous precedent.
- Valid site assignments must remain valid.

Response: As the Department stated in the background document and as established in the draft regulations, for those facilities site assigned prior to June 8, 2001, the date of the promulgation of the new, more stringent siting criteria in the Site Assignment Regulations, the newer setbacks will not be applied as long as the facility has a valid site assignment. In other words, the existing site assigned footprint will not be altered. The Department agrees with facility owners that where they obtained a site assignment through a valid site assignment process then retroactive application of the newer criteria is not justified. However, the older criteria as outlined in 19.038 will still apply to those areas site assigned prior to the issuance of the first siting criteria in 1988 as has been the case since 1990. The regulations were modified slightly to clarify pre and post 2001 site assignments.

Comment: We support those revisions in the draft regulations that appear to exempt expansions in areas that were site assigned or that had completed their site suitability reports before June 8, 2001 from the retroactive application of the revised site assignment criteria. Thus, we support including in the final regulations the proposed language in Section 19.038(2)(a)2. as well as the new language in the preamble to 19.038(2)(c). Similar language in the 19.038(1) would clarify DEP's intent regarding application of these criteria.

- Add language to 19.038(1)(a) to make clear that vertical expansions of landfills are presumed to comply with all site assignment criteria and all additional landfill criteria in 19.038(2)(c) and (d) unless there are specific written conditions in the site assignment document itself that require a demonstration of compliance.
- Add a parallel statement to not require additional analyses in permit applications on analyses performed for MEPA.
- We oppose the proposed language in 19.038(1) as applied to ATC and permit modifications that "…If an analysis has not previously been completed and approved for the area under consideration for the permit then an analysis must be completed for the permit application…." We oppose because of the potential for it to be used as the basis to cause an expansion of a project in an area with an existing, valid site assignment to undergo further examination.
- We oppose any revision to, or interpretation of, 19.038 that would require facilities seeking ATCs or permit modifications to perform FIAs.

Response: The Department has clarified the language in 19.038 to distinguish which criteria apply to areas site assigned pre-2001 vs. post-2001.

The Department has decided, as a result of both public comment and looking back at assessments conducted to date, to withdraw the Facility Impact Assessment criterion at this time.

Comment: The increased setbacks adversely impact the siting of new facilities. We are concerned since the DEP is proposing that new site assignment criteria be applied to projects on property with existing site assignments. This is akin to the concept of "double jeopardy" for communities and proponents with interest in these projects. Also, DEP should not require new risk assessment analyses be performed on currently site assigned property for the same reasons.

Response: The draft regulations did **not** propose to apply the new siting criteria to facilities that have an older, valid site assignment. See responses above.

Comment: All the limits on distance to waste handling areas should begin to be counted at the facility's footprint NOT the waste handling area footprint. This rule change would hurt no one – reputable solid waste companies included – as 500 feet from the facility is really not that large an area to protect. It would however have a significant impact in protecting people and limiting irresponsible garbage companies that include in their general operations an obvious desire to skirt the DEP's regulations by opening transfer facilities just one foot over the DEP regulations to children's dance schools, day cares, and home.

Response: The decision on how to measure setbacks was made when the Site Assignment Regulations were developed in 1987. The draft Solid Waste regulations did not propose to change **how** setbacks were to be measured. Therefore, no change has been made on this issue.

When the siting regulations were drafted it was clear that the "footprint" of facilities can vary a great deal. Some facilities have significant buffer area between the waste handling area and the property boundary, whereas other facilities do not. Since the site assignment regulations and the solid waste regulations are primarily concerned with protecting people and the environment from solid waste management activities, the decision was made to measure all distances to the "waste handling or disposal" area, not the property line as suggested. Other impacts associated with a solid waste facility, such as truck related impacts, are no different than trucking activities at any facility served by trucks such as a warehouse and can be addressed by local bylaws and conditions on site assignments.

Comment: 19.038(1)(g), 19.038(2)(a)1. – DEP would require permits for post-closure uses to provide certification of compliance with the MEPA process. We oppose this revision. Post-closure uses should not be forced to go through the MEPA process unless a MEPA-related threshold has been exceeded.

Response: This section is not new. The section does not require a post-closure project to go through MEPA, but rather requires the applicant provide evidence to the Department that the project has completed MEPA or is exempt from MEPA. Post-closure projects may trip MEPA thresholds related to the post-closure use or for other reasons and the applicant will need to demonstrate that he/she has complied with MEPA requirements.

Comment: 19.038(2)(a)4. – Delete the proposed addition of the phrase "result in nuisance conditions". The term "nuisance condition" is too subjective for meaningful or fair enforcement.

Response: The change was made to the regulations. Nuisance conditions are addressed by any number of other criteria.

Comment: 19.038(2)(a)5. – Several comments were received on this section:

This is a vague requirement that would require any facility that is requesting a permit modification to evaluate facility impacts with those impacts from other facilities in the area. Unsaid in the regulation is that the specific criteria to be used in this evaluation are provided in the newly-proposed "Guidance for Conducting Facility Impact Assessment for Solid Waste Facility Site Assignment and Permit". Ref-Fuel strenuously objects to the use of Department "guidance" to regulate.

This allows the Department to consider "the impacts of existing sources of pollution or contamination, as defined by the Department," when evaluating the general review criteria. It would therefore be helpful if the Department could articulate the method by which it will define "existing sources of pollution or contamination" so that project proponents can evaluate whether they can satisfy this criterion when quantifying the risks associated with the development of a solid waste facility.

It is unfair to require a solid waste facility to mitigate existing sources of pollution in the surrounding area that are unrelated to the facility itself.

The facility impact assessment requirement should be deleted since available information already presented to the Department in a number of reports strongly indicates that the health risks due to landfill emissions are de minimus. Cumulative Impacts Analysis for the Granby, Fitchburg and South Hadley landfills reviewed for this comment letter all indicate that landfills present de minimus health risks, even at the landfill boundary.

At a minimum, the regulations should specifically cite the guidance document, and the guidance should be specifically integrated into regulation under the normal rules of rulemaking.

Response: Based upon public comment and consideration of the assessments done to date during site assignment, the Department has decided to withdraw this criterion from the regulations.

Comment: The Guidance for the Assessment of Groundwater and Surface Water for Solid Waste Facility Site Assignment and Permitting is included as Appendix B to the facility impact assessment guidance. It is therefore assumed that the Department's intention is to include these requirements as part of any permit modification, regardless of how insignificant, that is subject to the facility impact assessment of 19.038(2)(a)5. A permit change of minor environmental significance (i.e., installation of a truck doorway) should not subject the facility to this major undertaking.

Response: DEP agrees and has modified the regulations to further distinguish major from minor permit modifications. In addition, the Department is withdrawing the FIA criterion from the regulations.

Comment: 19.038(2)(a)6. – A standard of "no leachate or contaminated surface runoff" into ground or surface water is not practical. The fact that some insignificant amounts are allowed when monitoring is feasible demonstrates that an absolute "zero" standard is not necessary.

Response: No change was made. The only time this criterion comes into play is in the very rare situation where it is not possible to conduct environmental monitoring of the site. In that case, all leachate or surface run off must be managed so as not to enter the ground or surface water because it is not possible to adequately monitor the site to determine if groundwater is being contaminated.

Comment: 19.038(2)(b)2. Criteria for Review of Applications for a Permit or Permit Modification for combustion facilities and handling facilities has setbacks of 250 feet to an existing or potential private water supply well and 250 feet to an occupied residential dwelling, prison, etc. if a handling facility and 500 feet if a combustion facility. We believe that a 250 foot distance is not only insufficient, but also inconsistent with 310 CMR 16.40(3)(c)4. and 6. We ask the Department to make this at least a 500 foot distance.

Response: These less stringent setback criteria only apply to those facilities that have a site assignment or a complete application from prior to June 8, 2001, which is the date when the new, more stringent siting criteria went into effect. If a facility received a site assignment after June 8, 2001 the newer, more stringent setbacks apply and the setbacks in 19.000 are irrelevant.

Comment: We strongly request the DEP to adopt from the Acts of 2004, (2A) of Section 320 Chapter 149, into the Criteria regarding the Zone II Area.

Response: The regulations were not amended as suggested. The Department believes that the regulations already adequately address the siting of facilities in Zone II areas by banning the siting of landfills in Zone IIs and only allowing the siting of a waste handling facility or a municipal waste combustor under very specific circumstances. Furthermore, the legislation referred to is specific to any facility proposed to be sited in the City of Brockton and will apply to any future proposal in that city, but not elsewhere in the state.

Comment: The new setback requirements in the Site Assignment Regulations are more protective of residents and nearby businesses and landowners and should not be reduced. DEP should instead ask if the siting criteria at 310 CMR 19.038 are sufficiently protective of public health, safety, or the environment, not whether it has an impact on siting.

Response: The new setback requirements will remain in the Site Assignment Regulations. DEP is not proposing to reduce them. However, those setbacks only apply to facilities site assigned after June 8, 2001. The criteria in 310 CMR 19.038 will apply to older, site assigned areas where no setbacks had been applied at the time the site assignment was granted because the site assignment preceded the siting regulations. This guarantees that there are setbacks that will apply to any areas used for solid waste management. The regulation was clarified to indicate that the criteria at 310 CMR 19.038 apply to older facilities site assigned before June 8, 2001 and that the setbacks currently in the site assignment regulations at 310 CMR 16.00 apply to facilities site assigned after June 8, 2001.

Comment: 19.038(2)(b) – Combustion Facilities and handling facilities **–** Revise 1 to expressly prohibit the siting of a combustion facility or handling facility in a Zone II. Add a new criterion to expressly prohibit any portion of

the site of a combustion facility or handling facility from being located in a Zone I (to be consistent with DEP water supply regulations).

Response: No change was made. The water supply regulations do not ban the siting of a combustion facility or a handling facility from a Zone II. Those regulations require the water supply owner to establish watershed protection zoning and non-zoning controls that, among other things, prohibit landfills. Zoning and non-zoning controls are not required to prohibit combustion facilities or transfer stations. The solid waste regulations currently have a strong presumption against the siting of a waste handling facility or combustion facility in a Zone II but allow such siting if the established criteria can be met. When the regulations were written, DEP did not want to preclude allowing, for example, a municipality closing their old, unlined landfill and replacing it with a transfer station at the same location.

The Site Assignment Regulations prohibit the waste handling area of a combustion facility or handling facility from being sited in the Zone I of a public water supply. Under the Site Assignment Regulations, however, other portions of a combustion facility or handling facility not related to waste handling could be located in a Zone I. Also, pursuant to the Water Supply Regulations, this could be allowed if there is a demonstration that such use does not have a significant adverse impact on water quality.

Comment: 19.038(2)(c) – Revise 1.d. to expressly prohibit siting of a landfill in the recharge area of a sole source aquifer.

Response: The regulations already prohibit the siting of a landfill in the recharge area of a sole source aquifer. However, siting a landfill in a sole source aquifer is possible if the criteria can be met that are established in the regulations. Those criteria are: 1) that there are no existing or potential public ground water supplies downgradient of the site; 2) there are no existing or potential private ground water supplies downgradient of the site, although the applicant may choose to provide a public supply to replace all the private supplies; and 3) there is sufficient existing or potential public water supplies to meet the municipality's projected needs. Meeting the criteria is very difficult and unlikely in most locations.

Comment: We would like to see more available and larger public notices in the DEP permitting process.

Response: The Department is not adopting further public notice requirements. DEP believes the regulations already require significant public notice and the requirements exceed what is required by statute. In addition, a municipality may, through its own by-laws, require further public notice requirements.

The regulations currently require that notices regarding a draft decision on a new facility or an expansion of a facility to be mailed to:

1. the applicant;
2. the board of health of the city or town in which the facility is to be located or the permitted activity is proposed;
3. the board of health of any municipality within ½ mile of the proposed facility ("abutting board of health"); and
4. abutters of the facility site.

In addition, the notice must be published in a daily or weekly newspaper of general circulation in the locality affected by the facility and paid for by the applicant.

Comment: 19.038(2)(e)2. – Similar to the discussion regarding waste bans, transfer stations that are an integral component of a MWC should be able to claim some of that MWC facility's recycling of metals and aggregate toward its compliance with the recycling requirement.

Response: This proposal does not meet one of the major objectives of the waste bans, i.e. to divert recyclable materials from disposal facilities to free up capacity for other, non-recyclable, MSW.

Comment: 19.038(2)(e)3. – This section allows some relief from the 25% recycling requirement under certain DEP approved conditions. The issue of implementation costs is a key one, and its consideration should not be limited only to municipally-owned facilities. Ultimately, certain increased cost is passes on to communities. Remove the words "at municipally owned facilities".

Response: The 25% recycling requirement is being deleted from the regulations, as explained elsewhere.

Comment: 19.038(2)(e)3. – In evaluating a reduction of the 25% recycling requirement, the Department should take into consideration the physical restraints of the facility. This is particularly true at an urban transfer station location where space is at a premium and no additional land is available to undertake the necessary processing to comply with the 25% rule.

Reponse: The 25% recycling requirement is being removed from the regulations. Therefore, no change was made in response to this comment.

7. 19.039 – 19.044: Permit Modifications, Conditions and Transfers

Comment: Several comments were received regarding the following issue.

As currently proposed, all permit modifications, regardless of their environmental significance, are subject to the Applicability and Review Criteria of 19.038(2)(a)1-12 and 19.038(2)(e). Essentially, a major expansion has the same requirements as a minor change such as updating of a waste ban plan. The need to implement a recycling plan and the need to conduct a facility impact assessment for any modification, regardless of its impact, is a particular concern to the members of IWSA. Changes that do not substantially alter a facility's environmental characteristics should not make the facility retroactively subject to these new, unrelated and costly requirements. In addition, existing transfer stations that modify their permit should not be drawn into these two requirements unless they are seeking a major expansion. Furthermore, creation or modification of a waste ban plan should not even be considered a permit modification since it is merely an operating plan that needs to be updated.

Ref-Fuel submitted very detailed comments and suggestions for modifying the language addressing major and minor permit modifications. Those comments have not been reproduced here due to their length and detail.

Response: The applicability section of 19.038 has been modified to make a greater distinction between major and minor permit modifications and the criteria that apply to each. As a result, the number of criteria that will apply to a minor modification has been greatly reduced.

Comment: 19.043(5): Conditions for Permits and Authorizations, Standard Conditions – Two comments were received on the following. The Department has added a new requirement to immediately report any emergency conditions (such as a fire). Covanta requests clarification of the Department's interpretation of an "emergency". Small fires can occur that are quickly and easily extinguished and don't rise to the level of an "emergency". We suggest that this notification requirement be limited to those emergencies that have an extended or material effect on the operation of the facility.

Covanta also requests that this specific condition be clarified by adding to (5) "by the next business day/24 hours".

Response: The regulations were modified to require reporting by the next business day.

8. 19.060: Beneficial Use Determination Regulations

Comment: The BUD program is highly important to the C&D industry and we must ensure that the new regulations will not hinder the forward progress and thinking that we have seen during the past few years. We hope that the regulation as proposed will not hinder the process for developing new markets both from an economic, logistical and timing standpoint.

The DEP should strive to ensure that the BUD process remains a tool that promotes reuse where/when materials can be realistically utilized. The up-front processes should allow the parties to assess the economic viability early on in the process to make sure that reserves are spent on viable endeavors.

Response: The C&D industry was included when Beneficial Use Advisory Committee meetings were held at the start of the regulatory revision process. All advisory committee opinions were considered throughout the regulation development process.

A primary goal of the beneficial use revisions is to encourage the safe beneficial use of secondary materials. One way this is accomplished is by developing clear standards and application procedures that applicants can expect to encounter during the application process. In addition, the Department will clarify in both the regulation and in

guidance that the burden of proof is on the applicant to demonstrate that a proposed secondary material is safe to use and will have an insignificant impact on public health, safety and the environment.

Comment: The district supports DEP's proposed revisions to clarify waste characterization, risk assessment, and other permit evaluation criteria. The district supports the use of more stringent standards for BUDs. However, CCA-treated wood and other treated wood should be excluded from BUDs for unlined facilities because of its ability to leach toxic compounds, such as arsenic.

Response: The revised regulations maintain a high level of protection by preventing significant risks, adverse impacts, and nuisance conditions from the use of secondary materials. Beneficial uses of treated wood at unlined landfills are evaluated on a case-by-case to ensure that their use does not create a significant risk to public health, safety and the environment or cause adverse impacts.

Comment: If the beneficial use provisions are adopted, the existing beneficial use provision, which restricts the Department's authority to the beneficial use of solid waste, will be eliminated, thereby expanding the Department's authority to include the regulation of any "residue or waste material, or other material that is no longer suited for its originally intended purpose, and is proposed to be used for a different purpose." Based on the foregoing, I question whether the proposed regulation of "secondary materials" exceeds the Department's authority to regulate solid waste under G.L. c.111, s.150A.

Response: The proposed beneficial use regulations do not expand the universe of materials that may potentially be used for beneficial purposes. The regulations have and will only be used to evaluate the beneficial use of solid waste. The term "secondary material" is included to differentiate between: 1) *solid wastes* that cannot be beneficially used due to potential risks, nuisance conditions, or the disposal-like manner of use; and 2) *secondary materials* which are solid wastes that are safe to use and are not used in a manner that would constitute disposal.

Comment: The definition of **"Secondary Material"** is likely to encompass a broad range of materials and products that may not necessarily be viewed as a "solid waste," and may have no need for a Department permit. For instance, any person who possesses or otherwise manages any material that is no longer suited for its original intended purpose, even though the material may not be a "solid waste," may now be required to secure Department approval to continue using the material. Similarly, because the definition of "Secondary Materials" is substantially similar to the term "recycle," it is not clear when the management of certain material would be regarded as "recycling," and free from regulatory oversight, or regarded as "Secondary Materials," and subject to regulatory oversight. In light of the foregoing, it may be helpful to hold on to the original premise that the proposed beneficial use regulations apply to the beneficial use of "solid waste."

Response: The heading and first section of the Beneficial Use regulations have been modified to refer to beneficial use of solid waste. The remainder of the BUD regulations were modified so that materials that are under review for beneficial use are termed "proposed secondary materials" to distinguish them from other solid waste.

In order for a "Recyclable Material" to be exempt from the Solid Waste Site Assignment Regulations, 310 CMR 16.00, it must conform to the definition of recyclable material as identified in 310 CMR 16.00 and be processed at a location that is not subject to the site assignment regulations pursuant to 310 CMR 16.05, Applicability. If the waste material does not conform to these conditions then a Beneficial Use Determination is required. Any recycled material use that did not need a permit for use prior to these regulations will still not need a permit. During the Advisory Committee Meetings, members of the committee said that they did not want the term "waste" to be associated with a material they are attempting to market. If there is any uncertainty as to the applicability of the Beneficial Use Regulations to a material use, the proponent may request a determination of applicability pursuant to 310 CMR 19.060(2), Determination of Applicability.

Comment: Historical and current policies for evaluating permit applications have hindered the process of developing new markets, both from an economic and timeframe standpoint. We ask that the DEP consider how they will help this industry find outlets and save usages for these recycled and diverted materials.

Response: The proposed beneficial use regulations aim to improve beneficial use markets by providing clear application requirements that facilitate the review process by issuing timely approvals that are based upon sound environmental principals.

Comment: This revision on BUDs is well done and is well balanced and reasonable.

Response: The comment is so noted.

Comment: The draft BUD regulations are more protective of public health, safety and the environment than the current BUD regulations. However, the BUD standards are not stringent enough. Since in many cases a BUD material may be placed on the ground, in a product that will come into contact with consumers or the public, or elsewhere unprotected or uncovered the strictest possible standard, say excess cancer risk of no more than 1 in 100,000, should be used.

Response: The Department reviewed regional and national beneficial use risk standards prior to establishing the beneficial use risk criteria and then set the standards at a level that is more stringent than the MCP because the Department decided it should be more conservative where materials were going to be placed into the environment, as opposed to being cleaned up from an already contaminated site. The beneficial use standards do not allow constituent concentrations at the exposure point to exceed any other existing Department standard.

Comment: Ref-Fuel believes that the substantial complexity and length of the new BUD requirements will discourage reuse. We encourage the Department to reconsider the revisions.

Response: The beneficial use regulations implement a review process whose complexity is commensurate with the potential risk of a proposed beneficial use. The review process is based upon sound environmental principles. Those materials with fewer hazards will have fewer application requirements and will be reviewed more quickly than those materials with greater potential for impacts due to higher levels of contamination or greater potential for exposure. Furthermore, the Department has developed a guidance document to accompany the BUD regulations to assist an applicant with developing a BUD application. This guidance document will be available when the regulations are promulgated.

Comment: We are concerned that the proposed changes would limit the beneficial uses of MWC ash for use as daily landfill cover, or for use in encapsulated form such as an aggregate in asphalt. We are also concerned that the level of analysis and reporting associated with obtaining a BUD will itself prove to be a major barrier.

Response: With the new BUD regulations, the Department believes that the process of obtaining a BUD will be more straightforward since each category of BUD will be tailored to the type of use proposed and the level of risk presented. The application requirements and approval criteria are established in the regulations and the associated BUD Guidance Document. This should make it easier for an applicant to determine the amount of data necessary to submit with an application and to identify, prior to submitting an application, what standards apply.

Use of MWC ash as an aggregate or ingredient in asphalt will be a Category 1 BUD, while use of ash as daily landfill cover will be a category 2 BUD. The regulations provide clear criteria within each category for approval of these BUD applications when compared to the existing BUD regulations. Furthermore, the BUD Guidance Document contains specific standards that secondary materials will need to meet if applying for a BUD. These changes should improve the BUD process.

Comment: It is not clear whether use of MWC ash as cover would fall under the Reuse in Regulated Systems category, or would be addressed in the alternative cover approval section. It is also not clear which category the use of MWC ash as an asphalt aggregate would fall.

Response: MWC ash as cover material would fall under the Regulated Systems category because the proposed use would be at a facility regulated by the Commonwealth, i.e. a landfill. MWC ash in asphalt would fall under Category 3, Restricted Applications because the proposed use would be limited to a restricted area, e.g. only as base material in a parking lot.

Comment: The new regulations should not affect existing BUDs, which have been derived on a case-by-case basis. This should be integrated into the proposed regulation by adding "(c) Determinations made by the Department prior to [EFFECTIVE DATE] shall not require a new determination under this section.

Response: BUD approvals issued prior to these revisions were issued using the same general standards of protection to public health, safety and the environment; therefore, these approvals will remain in affect after promulgation of the revised regulations. It is not necessary to obtain a new determination or undergo additional

review as a result of these regulations for an existing approved BUD. The Department does not feel it necessary to include a specific exemption in the regulations.

Comment: The Restricted Applications category appears to apply to beneficial uses that use risk management techniques to protect public health and the environment. This category appears to require property owner notification for each location, which would pose an enormous burden if ash in asphalt falls under this category.

Response: Restricted applications could occur at a specific site or at a specific type of location, such as within a roadway. At a specific site, property owner notification will be required to maintain protection to public health, safety and the environment, whereas use at a type of location may not require notification for each beneficial use. This decision would be made by DEP on a case-by-case basis.

Comment: It is not clear who is supposed to submit the BUD application.

Response: Anyone can apply for a Beneficial Use Determination. The Department has issued Beneficial Use Determinations to waste generators, processors, brokers, and end users. In certain cases, the Department will issue a general Beneficial Use Determination as a policy. Anyone conforming to the conditions of the general Beneficial Use Determination can beneficially use the material as described in the policy. Only the parties identified in a Beneficial Use Determination are authorized to perform activities identified in the permit.

Comment: The proposed regulations use both the term "waste" and the term "secondary material". These terms need to be used consistently.

Response: The term *secondary material* is used for material that is under consideration for beneficial use or that has received a positive determination of beneficial use. The term *waste* is used for a discarded material that is not under consideration for beneficial use and is not a recyclable material.

Comment: The regulations use the term "Regulated Systems" in one reuse category. "Regulated Systems" appears to refer to regulated solid waste facilities, but this should be clarified. Use "Regulated Facility" in place of "Regulated System".

Response: The term regulated system is used because a proposed beneficial use may take place at an individual facility regulated under one or more sets of regulations or multiple facilities such as material used as daily cover at any regulated landfill.

Sampling Methodology

Comment: Several commenters indicated that the standard for sampling should be to sample the total mass of a material rather than individual materials. EPA employed this sampling at the Fort Ord project last year. The determining factor is the ultimate risk to the persons processing or using the recycled material, so the whole mass is the basis for judgment. With regard to reuse not resulting in increases in Critical Contaminants of Concern (CCCs), this does not seem reasonable if the levels of CCC with the reused material are below environmental and health risk levels. With regard to background, the MCP should be the standard.

From a practical operating perspective, if the materials are bound together then they are not separate matrixes. The option for characterizing the mass material must be an acceptable practice because separation of the matrixes at times may be virtually impossible and surely not economically viable. Any requirement that results in considering less than the full mass of the substrate will significantly diminish the BUD program and reduce the ability to meet the goal of minimizing reliance on landfill disposal.

Response: The Department will take the comments under advisement. The sampling methodology is not established in the solid waste regulations but rather through guidance and on a case-by-case basis. DEP asked for comment on this issue because it has had to review proposals where the contaminants are not bound up in the matrix of the material and can to some extent be separated from the mass of material. While on the one hand determining the acceptability of a proposed use based strictly upon the risk to public health, safety and the environment makes sense, the Department would also like to minimize the introduction of contaminants such as lead or arsenic into the environment to the greatest extent possible, which would require removal of the contaminants from the underlying matrix prior to reuse. Where a contaminant becomes a part of the matrix of a material, separating the contaminant from the material is not generally possible and this must be considered in such a case.

As is explained more thoroughly in other responses, the background level for the BUD regulations is more stringent than background as defined under the MCP because the goals of the two programs are different. In the BUD program, materials are being introduced to a potentially clean environment and therefore DEP believes it necessary to minimize the introduction of contaminants, whereas the MCP is a site clean up program where removal of contaminants is the goal and the cost of cleanup is a major consideration. In this case, the cost of cleanup can be tied to the standard used for the cleanup and a more stringent cleanup standard will result in higher costs.

Comment: Sampling should be based not on the total weight of materials, but only on the surface or portion of the material that has the toxic substance and then make an evaluation of the route of exposure (like adhesion of lead from lead painted wood or concrete onto skin and then into the bloodstream) and make a specific determination in each case.

Response: The Department will take the comments under advisement. See the response to the previous comment.

Comment: With regard to DEP's question regarding the proposed risk standards, the Department should consider the full benefits of a BUD reuse rather than a single parameter-based determination.

Response: The Department will consider the full benefits of a proposed use when making a determination, and will not allow risks to exceed the established standards**.**

Comment: Stricter Upper Concentration Limits (UCLs) should be used in the BUDs than in the MCP.

Response: The UCLs are set at the same levels in the BUD regulations as in the MCP. The UCLs are not risk-based numbers, but rather establish an upper limit for contaminants of concern, regardless of the control measures implemented and the use to which the materials are proposed. Because the UCLs are not risk-based, it was decided to use the same numbers for the BUD regulations. On the other hand, with regard to risk assessments, the Department has established a lower risk level for a beneficial use determination than is allowed in the MCP because contaminated materials are being placed into the environment rather than being cleaned up from an already contaminated site and the Department wanted to ensure that secondary materials would be safe to use.

Comment: With regard to UCLs, it would be more appropriate to consider concentrations based upon the specific use and public welfare benefits of a proposed BUD material, as opposed to a blanket UCL for all BUD materials.

Response: UCLs are intended to define an upper limit for concentrations of contaminants of concern that would be allowed in a proposed use. UCLs are not risk based and generally are only applicable where the concentration of a contaminant is relatively high and the proposed use meets health based standards because of the management methods proposed, such as using 3 feet of clean fill on top of the BUD material. It is not expected that UCLs would be a factor in decisions very often and to develop case specific UCLs would be time consuming. It is expected that for most BUDs the risk based standards will limit contaminants of concern to levels below UCLs.

Comment: Standard that the concentration of a CCC in a BUD material shall not exceed the background concentration is reasonable.

Response: The Department agrees.

Comment: With regard to the concentration of CCCs, this standard if applied should be weighed with all of the potential benefits and allow discretion to consider the over-all benefit of the reuse.

Response: The standards for proposed use of a material with CCCs are very protective because these are contaminants of special concern that have significant impacts on public health. The Department believes that the standards for use of a material with CCCs should be very clear and protective because CCCs present an elevated threat. Therefore, the Department is publishing clear standards in guidance that applicants will know about before contemplating a project.

Comment: BUD regulations should use more stringent determinations of background than the MCP, certainly no more than 50^{th} percentile and perhaps 25^{th} percentile.

Response: The BUD regulations use a more stringent determination of background than the MCP. The MCP uses the 90th percentile of a valid dataset to establish background, whereas the BUD regulations use a more conservative 50th percentile of a valid dataset. This was done because BUD materials are being placed into the environment whereas under the MCP contaminated materials are being removed from the environment. This is an important distinction and the Department believes a greater safety factor is appropriate under the BUD process.

Comment: The Department should consider using the MCP criteria (90th percentile of a valid data set) to be more consistent with the existing program.

Response: Consistency is not the appropriate outcome because the two program's goals are different. See response to previous comment.

Comment: The comparison concentrations and risk levels specific to re-use Categories 3 & 4 are more stringent than those required at MCP sites. This is not consistent with the MCP and is considered unnecessary when a risk assessment determined a Condition of No Significant Risk. Therefore, we recommend that the risk levels in these situations (i.e. for BUDs at existing or closed MCP sites) be the same as those specified in the MCP. We also believe that these activities should be performed/directed by an LSP.

Response: Proposed reuse activities at MCP sites, if determined to be adequately regulated under the MCP, would not also be subject to the BUD process or standards. In such a case, the MCP risk standard would be appropriate. LSP oversight would apply at an MCP site, as appropriate.

Comment: The newly proposed BUD process, while providing more clarity than previous approaches, has not streamlined the process. The LSPA believes a "self-certification" process could be one step to assist the DEP with streamlining this review and certification process.

Response: The Department believes that by clarifying the beneficial use process and providing beneficial use categories and application requirements that are commensurate with the degree of risk of a proposed reuse, the process is more streamlined than the current general one-size-fits-all approach. DEP is willing to explore the concept of "self-certification" for simpler categories of BUDs after gaining experience with the new procedures.

Comment: Table 12 of the 18 March 2004 "Draft Interim Guidance Document for Beneficial Use Determination Regulations" seems to restrict materials from beneficial uses if concentrations of oil or hazardous materials exceed levels shown in this table. Several of these constituents (such as arsenic at 11 mg/kg) have extremely low levels, below natural background levels and below MCP standards. These levels will likely restrict use of materials that may not pose unacceptable risks, and will likely promote disposal of materials over recycling and reuse.

Response: The values identified in Table 12 provide relatively conservative limits for specified exposure conditions to ensure protection of public health, safety and the environment. However, the applicant may choose to conduct a site-specific risk assessment to consider site-specific risk issues that may result in an increase in allowable concentrations for specific reuse scenarios.

9. 19.062: Demonstration Projects

Comment: The district supports DEP's proposed revisions.

Response: The comment is so noted.

II. <u>Landfill Design and Operational Standards</u>

1. 19.106: Quality Assurance and Quality Control Requirements

Comment: 19.106(4) - Requires the "actual" hydraulic performance to be tested which will be difficult or impossible to accomplish on the in-place completed system. Unless DEP has specific, economically viable test methods in mind, this requirement should be deleted.

Response: The Department's intent was to have a requirement for testing the final completed liner system to demonstrate its effective performance before the actual landfilling of waste started. Although there are fairly stringent QA/QC testing requirements on each component of the liner system as it is being constructed, in the past

there has been no actual "test" of the final completed liner. Through participation in various technical seminars, the Department has become aware that activities after the primary liner has been installed, such as placement of the drainage blanket, may have a negative impact on the liner. The Department intends to require a "final" performance test on the liner system. The test method employed to demonstrate the performance of the final constructed liner is not limited to a "hydraulic" test in all cases. The intent is that whatever method is used must demonstrate that the hydraulic performance of the finished liner was comparable to the intended design performance standard.

The Department knows of two technologies that could be used for such testing. A flood test would involve filling the completed cell with water, or sections of the cell at a time, so that all of the liner in the cell has been subjected to a hydraulic loading, and then watching for the response in the leak detection system. The Department is also considering test methods, such as electro resistivity, that can be used after the drainage blanket is installed to test for holes in the FML liners.

The Department is aware of a few states that require this type of testing, including New York. In addition, the RCRA regulations for hazardous waste landfills require this type of testing.

The cost associated with this type of testing is not minor and may run into a few thousand dollars per acre. However, the Department believes this cost is warranted since it will give a higher degree of confidence in the constructed quality of the completed liner system. This will potentially preclude much more costly remedial actions should a construction defect be discovered after waste has been placed.

Comment: 19.106(4) - The Department should consider storm water monitoring as one of the acceptable methods for hydraulic testing of the primary liner system. In cases where sufficient time exists between completion of construction and the start of operation, data on storm events and monitoring of secondary leakage could be collected. This data could serve as a hydraulic performance test of the entire, as-constructed system.

Response: Storm water that falls onto the completed liner may potentially be used as the source of water for testing the actual as-built performance of the liner. The specific applicability of this will have to be addressed during the permitting process.

2. 19.110: Ground Water Protection Systems

Comment: The district supports double liner systems.

Response: The Department notes your support.

Comment: We strongly support the requirement for double composite liners. Double liners are clearly "cost effective", especially if you compare the $3.32/ton cost for the 2nd liner in comparison to the incalculable cost of groundwater contamination from a single lined landfill. Requiring double composite liners is a terrific improvement that will provide substantial environmental benefits. However, DEP should not conclude that a leak in the secondary liner is "unlikely". Also, how does a landfill operator correct a leak in the primary liner, when it inevitably occurs, since the liner is covered by many tons of solid waste?

Response: The Department believes that a leak in the secondary liner would not result in a significant release to the environment. The hydraulic "head" on the secondary liner should always be low because of the leachate removal ability of the primary drainage system, even when the primary liner has a leak. Also, when the flow in the secondary liner exceeds the Action Leakage Rate (ALR), corrective or remedial actions will have to be taken to address the problem.

Fixing a leak in the primary liner after many feet of waste has been placed is a difficult undertaking. However, other means could be used to address such a problem such as placing a new "liner" over the in-place waste and thus creating a hydraulic boundary preventing the vertical migration of leachate. Such a liner would redirect leachate away from the damaged base liner to another secure collection point.

Comment: The maximum Action Leakage Rate (ALR) of 100 gallons per acre a day is too high, considering that studies show the average monthly leakage in double lined landfill cells is from 0-33 gallons per acre per day (see Leakage Through Liner Systems, George Yazdani, March 1997, by Polyflex, Inc.)

Response: The 100 gallons/acre/day ALR represents a value that the Department believes is reasonable when balancing the collection capabilities of a secondary leachate collection and removal system with the primary function of identifying the presence of a leak in the primary liner. The Department believes it is reasonable and environmentally protective to allow a collection rate of 100 gallons/acre/day in a secondary collection system because this is a very small quantity that only produces a very small head (the driving force for a leak) on the secondary liner, which should not result in significant leakage through the secondary liner (also see answer above.)

Comment: Leachate storage facilities – DEP should require a minimum capacity, such as the amount of leachate that would be generated in a 72 hour period by a 100 year storm.

Response: The IWW holding tank regulations, 314 CMR 18.00, establish certain specific requirements for all industrial wastewater holding tanks, which include leachate tanks. The IWW holding tank regulations have been incorporated by reference into the solid waste regulations. One of the requirements of the IWW holding tanks regulations is that tanks must have a minimum storage capacity of 500% of the average daily flow.

Comment: 19.110(2)(e) – The intent of this new requirement needs clarification. It is not clear how this fits together with the proposed requirement to assure that there is a vertical berm at the edge of the liner to provide containment. We are very concerned that the proposed change may result in significant reductions in overall landfill stability. The resistive force of earthen berms or bowls containing the landfill mass add significantly to the overall stability of the landfill mass. This proposed change should not be adopted without a more detailed evaluation of the impacts to landfill stability.

Change this section to reflect that interior surfaces may direct flows to interior swales that provide positive drainage to the perimeter of the landfill.

Change the language as follows: "…be constructed so that the slope of the liner provides positive drainage to <u>those locations along</u> the perimeter of the landfill <u>where collection is achieved</u>."

Covanta requests that the language be changed as follows:

> "….be constructed so that the slope of the liner provides positive drainage to **those locations along** the perimeter of the landfill **where collection is achieved."**

Many landfills are designed with specific collection sumps at one end on the cell where the leachate is pumped out of the cell.

Response: Stability of the landfill is a primary and fundamental consideration for any landfill design. Nothing in this section, or any section of the regulations, was intended, nor should be interpreted, to compromise the stability requirements of a landfill design. The intent was to require that the base liner always have a slope that will direct leachate, by gravity, to the perimeter of the landfill. Base liner designs that direct leachate to an interior collection and removal locations will not be allowed. Where berms are used on the outside or perimeter of a landfill base liner, directing leachate to the base of that berm is not a conflict with this design principle. A language change to clarify this issue is included in the revised regulations.

Comment: 19.110(2)(i) – What are the specific design requirements which will require a 1.5 factor of safety? This criterion is vague and should relate only to specific design parameters instead of a general statement.

Clarification should be added to specifically exclude stability under seismic conditions from this requirement. A factor of safety of unity (1.0) should be the criterion for seismic conditions. A factor of safety of 1.5 for seismic conditions is not economically achievable or warranted in the New England area.

Response: The Department agrees in principle with the unsuitability of the use of a one size fits all factor of safety. The Department also believes that the FS used in a landfill design should be carefully considered and identified in designs submitted to the Department for review. The Department will remove the 1.5 FS requirement and instead require all landfill applications to identify and justify the FS used in the design.

Comment: 19.110(3)(b) - New Areas – Slope greater than 4:1 – For areas with a slope greater than 4:1 we suggest using a double composite liner as follows:

> Primary: GCL/FML

Leak Detection: geonet
Secondary: FML

The potential for liner leakage is substantially reduced on steep slopes due to the fact that very little head will exist on the liners. We prefer a composite liner for the primary liner rather than an FML only, since this is the layer that is in contact with the highest (albeit small) leachate head. Thus a composite primary liner will be more protective and will have a lower leakage rate than a single FML primary liner. This alternative meets the Department's goal of providing a leak detection zone within a lined area. DH generally agrees with the concerns expressed previously by the liner sub-committee regarding the construction difficulties with the construction of a CCL on a long steep slope and recommends that a CCL not be required to be constructed on steep slopes.

However, for perimeter berm construction with a height of 10 feet or less, we believe that these berms should have a double-composite liner the same as for new areas with a slope less than 4:1.

Response: The Department believes that double composite liner technology should be used wherever new waste disposal areas are being developed over virgin (no existing waste) land. The Department believes that the appropriate level of confidence to ensure the effective long-term performance of a liner system is best achieved with the use of a double composite liner system, even on slopes greater than 4:1.

The Department also intends to keep the requirement for a CCL component in the secondary liner, even on slopes greater than 4:1. Compacted clay liners improve or add important beneficial characteristics to liner systems that may not be provided by other liner materials, such as thickness (for penetration protection), being an inert natural low permeability mineral soil with low shrinkage potential, having a long history of successful use, preventing diffusion transport of organic compounds and differentiation – CCL materials, by being physically and chemically different that other liner components, complement other liner materials thus adding to the overall successful performance of the liner system under a wide range of conditions.

The Department also has an established record that documents the successful construction of CCL on slopes steeper than 4:1; some steeper than 2.5:1

Comment: 19.110(3) - We oppose the requirement for double composite liners for areas where the slope is less than 4:1 and double liners where the slope is greater than 4:1. DEP cannot justify the extra expense.

Requiring that the minimum liner configuration for all areas where the slope is less than 4:1 be a double composite liner, further reduces the amount of space available for waste disposal. Double liners with a built in leak detection system achieve a high level of protection without using the airspace given up to a double composite liner.

Response: The Department believes that double composite liner technology should be used wherever new waste disposal areas are being developed over virgin (no existing waste) land with the qualifier that when the slope of the liner is greater than 4:1 double liners are required. The department believes that the appropriate level of protection to ensure the effective long-term performance of a liner system is best achieved with the use of a double composite liner system. The Department believes that the cost differential between a double liner and a double composite liner is around 5 % when adjusted on a per ton basis. The Department believes the added level of confidence and environmental protection provided by a double composite system justifies the expense.

Comment: 19.110(5)(b)1. and 19.110(6)(b)1.d. – Modify the language as follows: "…be compacted, uniform and free, <u>as much as is practical,</u> of debris ….." This change acknowledges that subgrade layer material that is completely devoid of foreign material is virtually impossible to obtain and such a standard is not necessary from a technical perspective. It is not possible to obtain material without some de minimus quantities of foreign materials.

Response: The regulation was not modified. The goal in constructing a liner from a soil material is to minimize, to the greatest extent practicable, the presence of detrimental materials such as stones, in the sub-grade or low permeability layer. The Department agrees that a zero tolerance for foreign materials is virtually impossible. As a result, the Department's Landfill Technical Guidance Manual includes minimum performance standards for the presence of stones in soil materials used in liners that it believes are reasonable and achievable.

Comment: 19.110(6)(b)3.d. – Several comments were received on the following issue: Please clarify if the current state-of-industry practice of using a bentonite bead between overlapping GCL panels would classify as "leak-tight".

Clarification should be added to require a minimum 6-inch overlap of GCL panels with a powdered bentonite applied at the manufacturer's recommended rate.

Response: The requirement as written will stand. The Department will continue to use the best available technology and/or industry standards to interpret compliance with this requirement. It is the Department's understanding, at this time, that the typical industry standard is a 6 inch overlap with a powdered bentonite bead between GCL panels.

Comment: The draft regulation includes the requirement to collect and remove leachate discharged into the drainage layer between the liners with an efficiency so that a leakage rate of 10 gallons per day/per acre will be detected within 24 hours. This is not technically feasible.

A typical geogrid can be expected to retain liquid based on surface tension. Assuming a reasonably small value of $1/16^{th}$ of an inch of liquid over a one acre surface, approximately 1,700 gallons of liquid would be stored before there was flow into the collection system. Thus a leak of 10 gal/acre/day may not be detectable for 170 days. This requirement imposes a technically infeasible requirement.

Response: The comment is duly noted and the Department thanks you for the technical information. As a practical matter, the specifics of the how the leak detection system will operate will have to be addressed during the permitting process. Regarding the leak volume/response time, the applicant would be expected to make the technical presentation, such as you provide, in their application that explains how the leak detection system will operate. It is the Department's understanding that the scenario you describe above represents the time needed to get to "field capacity" or initial saturation of the leak detection layer. Additional leakage, after saturation has been achieved, at a rate of 10 gals per acre per day, or greater, should be detected within 24 hours as required.

Comment: 19.110(8)(b)5. – This proposed new standard states that "the head in the secondary collection system will not, in general, exceed the thickness of the drainage layer". Since this applies to design standards, the text should be clarified to only apply to newly permitted or site assigned facilities.

Response: Unless otherwise noted, the requirements in the draft regulations at 310 CMR 19.110 apply only to new activities approved after the effective date of the final revised regulations. Existing approved landfills do not have to retrofit already constructed and/or operating secondary collection systems.

Comment: 19.110(8)(c)1. – Please modify the language to base the action leakage rate on a monthly average as opposed to a 30 day average.

Response: The regulation will be changed to a monthly "rolling" average. The Department's intent is that when the average of any 30-day period exceeds one-half the ALR the Department should be notified. Therefore, the regulation was changed to "rolling" average.

Comment: 19.110(8)(c)3. – Several comments were received on this issue. Please modify the language of this section as follows:

> "Where leakage into the leak detection system is occurring at a rate greater than one-half the ALR, **the owner/operator of the facility shall notify the Department via the next monthly inspection report. However, where leakage into the leak detection system for any single day is occurring at a rate greater than twice the ALR, the owner/operator of the facility shall notify the Department within 72 hours."**

This would clarify that calculation of the ALR, and any necessary reporting to the Department, occurs at the end of the month. One-half of the ALR shouldn't trigger the same response as if the ALR were exceeded.

Response: The language in this section will be revised to clarify that written notification will be required within 72 hours once for every 30 day period (rolling average) where leakage exceeds one-half the ALR. In addition, written notification will be required within 48 hrs. where leakage exceeds twice the ALR in any single day.

3. 19.111: Alternative Ground Water Protection System Design (There is one response for all the comments included in this section.)

Comment: Do not promulgate the proposed changes to this section at this time. Take this issue back to the Solid Waste Advisory Committee or the liner sub-committee for further review, specifically to consider whether or not the Department should consider allowing vertical expansions over existing landfills with a composite or double liner, without requiring additional liner construction as well as more flexibility in regard to operational timeframes.

Comment: We oppose the need for a double composite liner over a functioning single liner, and the need for an additional single liner over a functioning existing double liner.

Comment: Waste placed over existing composite liner areas – slope less than 4:1 - Section 19.111(c) does not address the liner requirements for a vertical expansion over an existing landfill with a composite liner where the slope is less than 4:1. It is suggested that DEP consider allowing vertical expansions over existing landfills with a composite liner, or double liner, without requiring additional liner construction, particularly if the vertical expansion is less than about 20-30 feet. It seems excessive to require additional liners for a limited vertical expansion. In addition the draft language in this section (c)2. indicates an operational timeframe of greater than 2 years for the expansion and then specifies a single liner requirement. What would the requirement be for an expansion less than 2 years? Would there be no additional liner requirement?

Comment: For much larger vertical expansions (say over 30 feet or determined by site), if leak detection monitoring is the Department's goal, the use of the following minimum system is appropriate:

Primary: FML
Leak Detection: geonet
Secondary: FML

This design allows for monitoring of a leak detection zone. DH agrees with the sub-committee that the design of liner systems over existing waste poses problem relative to gas collection system construction above and below "piggyback" liner systems and impacts to liners due to waste settlement. If a composite liner will be required for this scenario we believe adding a GCL component to the primary liner would be most effective.

Comment: The Northamption Landfill is considering the utilization of air space over the existing composite lined landfill. Since the existing composite liner system is functioning as designed, there is not a practical need for another liner to vertically expand the landfill. There may be other comparable landfill sites that have potentially available capacity should they vertically expand. It may be more beneficial to utilize this type of capacity on existing sites rather than developing horizontal expansions or otherwise seeking out undeveloped property for new landfill development.

Comment: Waste placed over existing composite lined areas – slope greater than 4:1 – For this scenario DH recommends a preferential drainage layer on the slope that would be used to transmit leachate to the new double composite lined area. The existing composite liner provides adequate protection of the constructed cell. The need to have separate leak detection for the slope should be decided by the project proponent, based on the costs and benefits of separately lining the slope for increased "valley" capacity. The proponent can decide if the space is valuable enough to line or if it is acceptable to have the potential of a shut down and lost capacity if on-site groundwater contamination is found.

If the Department requires leak detection on these side slopes we recommend the following liner system:

Primary: FML
Leak Detection: geonet
Secondary: FML

This cross-section allows for leak detection. The potential for liner leakage is substantially reduced on steep slopes due to the fact that very little head will exist on the liners. For this reason composite liners are not warranted for this application.

DH has strong reservations about the feasibility of constructing a CCL on a steep slope, which is underlain by waste. We question the ability to achieve adequate compaction of clay at the moisture contents required on slopes greater than 4:1. It is anticipated that under this scenario the steep slopes will also be very long, since they would be waste slopes from a previously filled landfill cell, further increasing the construction difficulties. Most or all of the engineers on the sub-committee also expressed concern about CCL constructability on steep slopes. If a composite

liner will be required for this scenario we believe adding a GCL component to the primary liner would be most effective.

Comment: We oppose the need to separate leachate generated in areas approved after the effective date of these regulations from mixing with leachate generated in areas approved before the effective date. There is no technical reason to prevent leachate originating in different areas from being mixed downstream, nor is there any reason to go to extraordinary lengths to channel leachate away from existing functional liners.

Response: The Department believes that a groundwater protection system (liner) should, wherever possible, be composed of a double composite liner to provide maximum protection to groundwater resources. This includes all new capacity, including vertical expansions where waste is placed over previously filled areas that are underlain by a liner that is less than a composite liner. Where the existing area was constructed with a composite liner, the regulation as now written provides the opportunity to propose an alternative to the double liner (see 19.110(5)).

Section 19.110(5) provides the Department's general position on the requirements for liner system where there is an in-place existing liner. The Department believes that an existing liner that is not a double composite liner is not sufficiently protective and does not meet the intent of the revised regulations for new capacity. Please note, that any capacity covered by an Authorization to Operate (ATO) approval is not affected by this requirement and therefore there is no need to revise the existing design or seek additional approvals.

There are many different scenarios and configurations for existing liners. The Department believes it is not possible to try to explicitly address all of them in the regulations. Instead the Department has provided an example of a typical situation and what the presumptive design requirements would be for that situation. This section is written with the intent to provide clarity balanced with flexibility to allow a wide range of liner options, governed by the specifics of the proposal related to, among other things, time, type of materials disposed, slopes involved and type and condition of existing liners.

4. 19.112: Landfill Final Cover Systems

Comment: The Shrewsbury Ash Residue Landfill is anticipated to continue to operate as a disposal facility for combustion residue. Ash landfills should not be subject to the requirements of sections 19.112(5) and 19.117. Gas is not generated by the inert materials deposited in ash residue landfills. As long as a landfill accepts only ash, it should not be required to install gas control systems or to test for gas.

Response: In the Public Hearing Draft, section 19.119 was proposed for removal. However, based on comments received and further evaluation by the Department, the Department has restored (with revisions) section 19.119. Section 19.119 allows the Department the discretion to determine whether gas vents will be required at ash landfills.

Please note that the revised regulations are intended to allow the commingled disposal of unburned MSW with MSW ash, a situation that will be expected to produce LFG that may need to be addressed.

5. 19.115: Storm Water Controls

Comment: Several comments were received that the new storm water specifications should apply only to new facilities. Existing facilities should, however, be required to maintain their existing systems for minimizing the discharge of pollutants. To fully comply, physical modifications would likely be required and would be accompanied by change-in-law costs to affected municipalities. We do not see the significant environmental benefit versus the cost to comply with this proposed regulatory change.

Response: The revised design standards in this section are applicable to unconstructed landfills or new expansions of existing landfills. DEP will only require these new provisions for new landfills or landfill expansions, landfills or landfill cells to be closed, for any new adaptive reuses to occur on top of closed landfills, and will not apply them to existing operating cells or to closed landfills.

Comment: The design standards have been increased from the 25-year storm to the 100-year storm. This requirement could add significant unnecessary costs to storm water controls. This requirement also prohibits recharge for the purpose of meeting storm water standards at landfills. This is inconsistent with the objectives of the storm water policy and will cause significant problems for obtaining Conservation Commission approvals and will increase flows leaving the site.

Response: Recharge: The regulation was modified to indicate that recharge would be allowed only where the recharge will not adversely impact the quality of ground water leaving the site. The Recharge standard in the Storm Water Management Policy is to be met to the maximum extent practicable. In those instances where introducing recharge into the groundwater would cause contaminated leachate to migrate off-site and cause a public health threat, conservation commissions and the DEP Wetlands Program have found that storm water recharge is not practicable.

25 to 100-year event: The regulation was modified to require control of the peak rate of run-off from a 24-hour, 25-year storm, and to require evaluation of peak rate from a 100-year storm and control, to the extent practicable, only where the evaluation indicates that there will be flooding up or downstream of the site. The Storm Water Policy currently requires an evaluation of the 100-year storm and only requires the controls for the 100-year storm if the evaluation indicates there will be flooding up or downstream of a site. The default backup in the Storm Water Policy is the 10-year storm, although as a practical matter, control of the 100-year storm is routinely provided because in many instances, the evaluation of the 100-year storm indicates there will be a flooding increase. The Solid Waste Regulations currently require attenuation of the 25-year storm as a default.

6. 19.119 and 19.131: Ash Monofills

Comment: The district supports DEP's proposed revisions to these sections.

Response: Comment noted.

Comment: We do not believe that DEP should eliminate entirely the regulations specific to ash monofills since some may continue to accept only MWC ash.

- Retain 19.119 on design requirements for ash landfills that accept inert materials only.
- Allow ash monofills that accept only inert materials to be exempt from requirements that apply generally to landfills that accept organic materials.

Response: The Department agrees with the comment. Therefore, the regulations were revised to retain a section on ash landfill design requirements that indicates that ash landfills may not have to comply with 19.112(5) and 19.117 for installation of landfill gas collection systems. Ash landfills would not likely need a gas collection system where only ash is disposed of.

Comment: We oppose the proposed elimination of the incinerator ash monofill requirement. Incinerator ash contains hundreds of toxic substances that have not been evaluated by DEP in their consideration of this change, some in very high concentrations. Incinerator ash is therefore much more toxic than MSW and should be disposed of in hazardous waste landfills. DEP has been negligent in its management of incinerator ash, and should require all trash incinerators to annually test incinerator ash to determine if it should be characterized as hazardous waste, which in most, if not all, cases it is expected to be. It would be a serious mistake to allow incinerator ash, which has not been adequately tested, to be co-disposed with much less toxic MSW, even in double lined landfills.

Response: The Department will proceed as proposed with elimination of the requirement to monofill ash. Any landfill, whether MSW, ash-only or C&D is required to meet the same liner standards and those standards are being upgraded at this time to a double-composite liner standard. No evidence or data has been presented to support the comment.

The Department disagrees that it has been negligent in the management of MWC ash. All MSW ash is required to be tested to determine if it is subject to the hazardous waste regulations. Generators of waste are required to maintain adequate proof that the waste material they dispose of is not a hazardous waste. Testing of MSW ash by generators to document that their ash is not a hazardous waste is a common and ongoing practice.

Comment: 19.119 – Covanta agrees with the proposed regulation's deletion of this section and the movement of its requirements to the appropriate sections of 19.110-19.118.

Response: Comment noted.

Comment: 19.131: Additional Operation and Maintenance Requirements for Landfills that Accept Ash The Department has added a requirement for a "vehicle washdown or wheelwash". Based on our experience, Covanta

requests that this requirement be removed from the general regulation. Wheelwash facilities are problematic to operate during winter months due to freezing conditions. Many landfills only use "offroad" ash trucks and specifically configured hauling routes to prevent offsite tracking by other vehicles. In addition, sites are equipped with street sweepers to maintain their roads. Even if this requirement is removed from the general regulations, the Department can still add it to facility permits on a case-by-case basis.

The text should be modified to allow alternate Department approved measures, such as use of street sweeping equipment or other methods.

Response: The regulation has been modified as suggested. The reader should note that the regulation says the Department "may" require a wheel wash. It does not say "shall". The intent here is to have adequate and appropriate controls installed at the landfill site to prevent, as much as practical, the transport of ash off the site. Street sweeping, although a good O&M practice, is an after-the-fact remedy. The Department wants the amount of ash leaving the site to be minimized.

7. 19.130: Operation and Maintenance Requirements

(15) Cover Material

Comment: Numerous comments objected to the proposal to place an upper limit on the amount of daily cover that can be used to no greater than 20% by weight of the waste. This is significantly more restrictive than the existing guideline of 25% by volume.

Response: The Department agrees with the comments and this stipulation has been removed. However, the performance standard stated in 19.150(15)(c)4 that requires that daily cover not be used in quantities greater than are necessary to achieve compliance is retained.

Comment: We recommend deleting the requirement that a final cover must be applied to a landfill within 90 days. Rather, the final cover should be applied according to a schedule approved by the Department.

Response: The Department believes that the requirement as currently written (which is not one of the proposed revisions to the current regulations) is valid and should remain the same. The language identifies 90 days as the outside limit for placing final cover but also clearly allows other timeframes as may be approved by the Department.

Comment: We believe that the proposed daily cover requirement should not apply to ash landfills since more cover material is generally needed at these facilities in order to minimize fugitive dust emissions. We request that ash landfills be given an exemption.

Response: See response to first comment in section 7 above. The proposed language has been removed. Ash landfills, like other landfills, will be required to apply sufficient cover material to meet the performance standards for use of daily cover but no more than is required to meet those standards.

(36) Re-Circulation of Leachate

Comment: We oppose the proposed change to allow recirculation of landfill leachate. Recirculation has been shown to increase the toxicity of leachate, which only compounds the problem when the inevitable leakage occurs. This proposal should be set aside until detailed studies can be conducted to determine the toxicity of the re-circulated leachate compared to non-circulated leachate.

Response: The Department intends to allow the provision for recirculation of leachate to remain. Although there are some legitimate concerns with leachate recirculation, such as potentially increased toxicity of the leachate and increased landfill gas production, the Department believes there are reasonable and adequate engineering solutions to these concerns. The potential benefits of leachate recirculation, such as increased disposal capacity and stabilization of the landfill mass, are important goals to be pursued by evolving technologies, as appropriate.

8. 19.132: Environmental Monitoring Requirements

Comment: Solid waste facilities that are already adequately regulated should not be drawn into the Massachusetts Contingency Plan process, which would add an additional layer and burden and cost without improvements to the protection of the environment or public health and safety.

NSWMA believes the premise underlying the 1994 adequately regulated exemption that allows landfills owners/operators to operate in only one regulatory universe is sound policy. The regulation of landfills should remain solely under DEP solid waste programs and should not be regulated at all under the MCP or 21E. DEP should resist any effort that blurs the adequately regulated exemption of landfills and should endeavor to keep landfill regulation out of the MCP and 21E programs.

Response: "Adequately regulated" means that a landfill assessment and closure will be conducted such that the activities are in accordance with both the Solid Waste Regulations and the Massachusetts Contingency Plan (MCP) regulations. The landfill owner/operator will be in compliance with both solid waste and the MCP regulations by being permitted under only one set of Department regulations. The route chosen by the Department usually depends on the level of contamination at the landfill site. In a number of cases, the Department has chosen to have landfills meet conditions set forth in the MCP when pollution/contamination conditions at the site warrant it. There is no addition of "another layer and burden and cost…." since permitting is done under only one set of regulations. However, the Department is trying to clarify that contamination that has moved off the landfill site must meet the MCP cleanup standards.

Comment: NSWMA recognizes how the 150 meter point of compliance criterion evolved through DEP discussions with EPA; knew that it was already incorporated as the standard in the Landfill Technical Guidance Manual; and anticipated the current DEP effort to codify this language in these proposed regulations. However, the Chapter favors current practice where groundwater is monitored on a case-by-case basis per DEP approval based on information derived from specific site information and the agreements in the permits of the landfill facility. Further, NSWMA believes that DEP should not attempt to require operators to evaluate groundwater beyond a facility's point of compliance. Expanding operator responsibility to evaluate groundwater contamination beyond a facility's point of compliance will subject operators to endless regulatory reviews, administrative headaches and additional costs. We fail to see how this proposed change will improve public health or environmental protection.

Response: The purpose of the 150 meter point of compliance (POC) is to establish an outer limit from the landfill where groundwater can be sampled to determine if it meets groundwater standards. If not, then DEP needs to determine whether further assessment is necessary. The Department considers it a reasonable and fair compromise distance in the large number of cases where the exact limit of the landfill's groundwater impact/influence has not been delineated outside the footprint of the landfill. The Department does not generally foresee situations where the point of compliance in an up-gradient area will exceed 150 meters. However, when environmentally sensitive potential receptors are located down-gradient of the landfill beyond 150 meters, the Department reserves the right to modify the monitoring network in that specific area. This may include construction and sampling of additional monitoring wells (and even private/public wells) in those locations. That is why the Department will retain the language "and/or as required by the Department" to allow decisions to be made on a case-by-case basis.

Comment: We oppose the inclusion of the proposed definition of groundwater point of compliance as a regulation. The choice of an appropriate point of compliance can vary greatly depending on site-specific conditions. DEP should continue to allow groundwater monitoring locations to be determined on a site-specific basis.

Response: The Department agrees that the appropriate POC will vary with site-specific conditions. The 150 meter point of compliance, which the Department has had in guidance for a number of years, was proposed to be added to the regulations to clarify that this is the <u>maximum</u> distance from the landfill that compliance is to be measured in cases where the lateral limits of the landfill's impact have not been determined. As discussed in the background document, the Department will review and approve monitoring plans for each facility and will be site-specific as has always been the case. In most cases, the POC will be as close to the landfill as is reasonable.

Comment: 19.132(1)(f) – Covanta requests that the following words be deleted from routine groundwater monitoring reports:

"The results shall include, unless otherwise approved by the Department, the following information:

1. site plans or maps showing sampling locations, ~~distribution of contaminants~~ and groundwater flow direction;"

While it may be feasible to display the sampling locations and groundwater flow directions on the same site plan, trying to display the distribution of all contaminants for all sampling locations would both be infeasible and would result in a confusing, unreadable plan. Instead, Covanta recommends that this requirement be reserved for site assessments such as those required under 19.132(1)(k).

Change the requirement to submit results in 60 days to 90 days.

Response: The language in the proposed regulation requires that information on distribution of contaminants be displayed on maps. It does not require that all information be on one map. It may indeed be useful, for example, to show distribution of significant contaminant(s) on as many maps or plans as necessary to make a specific point about the distribution of contaminants over time.

The comment includes no rationale for increasing the number of days required to submit results to the Department from 60 to 90 days. 60 days is a reasonable time to get all the sampling information and analytical data in a form that can be submitted to the Department.

Comment: The suggested format for reporting groundwater/surface water results to the DEP is somewhat vague. We suggest that DEP work with the industry to develop specific formatted tables for organization of the results to be reported and that DEP release the formatted tables as part of an update to the Landfill Technical Guidance Manual.

Response: No changes will be made to the regulations at this time, however the Department will work with the SWAC on this suggestion.

Comment: 19.132(1)(j) – For semi-annual environmental monitoring of surface water, the Department requires the surface water sample results be compared to "Ambient Water Quality Standards". Covanta requests the Department clarify which specific standards are being referenced: 314 CMR 4.00, Mass. Surface Water Quality Standards? Federal Recommended Water Quality Criteria developed pursuant to Section 304(a) of the Clean Water Act?

Response: The Massachusetts Water Quality Standards, which may be found at 314 CMR 4.00. This reference has been included in the regulations.

Comment: We strongly disagree with the addition of the Ambient Surface Water Quality standards to 19.132(1)(i). The ASWQ standards have the potential to be lower than historical background levels at some facilities, which would trigger unnecessary re-sampling, assessment and, potentially, corrective action where none is reasonable, feasible, or necessary to protect the public health or the environment.

Response: No change was made. The regulations provide ample latitude for the operator to make a case to the Department and the Department to determine that sampling is or is not necessary based on the information available.

Comment: 19.132(1)(k) – We oppose the added language in 19.132(k). As indicated in the following section, landfills already have compliance responsibilities for impacts of their operations at locations down gradient of the point of compliance. The added language, however, seems to state that impacts down gradient are automatically to be attributed to active landfill operations, whether or not such is actually the case, and to trigger the full assessment process. The DEP already has the authority to determine the assessment and/or corrective actions that should be required. Adding a requirement with references to the MCP adds nothing to the DEP's regulatory authority. Rather, it removes authority from regional compliance staff to use their discretion.

Response: Nothing in the language added to the regulations says that the Department "automatically" ascribes blame for down-gradient contamination to the landfill operation. In fact, the language of the regulations states "**Where** the Department determines, at any time, based upon the ground and surface water analysis … , the operator shall undertake ..". The purpose of further assessment will be to demonstrate that the landfill caused or has not caused contamination at down-gradient locations based on sampling and other environmental information on the larger general area in which the landfill is located.

Comment: 19.132(4)(b) – To the extent that the proposed change adds flexibility for DEP to decrease the frequency of gas monitoring, we support the proposed change. The regulations should provide DEP with the discretion to relax the frequency of monitoring where quarterly monitoring adds costs without benefits.

Response: Establishing the Department's prerogative to increase or decrease the frequency of gas sampling, based on available data, is one of the main purposes of the new language.

9. 19.140: Landfill Closure Requirements

Comment: The District supports DEP's proposed revisions to this section and the post-closure requirements.

Response: Comment is noted.

Comment: All landfill closures should be under 21E. Before any landfill closure actions are required, the appropriate MCP analysis should be conducted (unlike what happened at the Maple Meadow Landfill in Wilmington, where DEP required millions of pounds of contaminated soil to be brought in to close and cap a landfill without any evidence that the landfill was leaking contaminants nor that any action at all was required).

All landfills should be regulated under 21E. All MSW landfills are essentially hazardous waste landfills. Studies show that leachate from hazardous waste landfills is only slightly more toxic than that from MSW or C&D landfills.

Policy 97-001 on the use of contaminated soil for closure and capping of landfills should be revised to be consistent with the MCP and Drinking Water Regulations, to prohibit depositing contaminated soil in Zone I or Zone II areas.

Response: Fundamentally, the MCP regulations and the solid waste regulations have the same goal, to protect public health, safety and the environment. However, the two regulatory programs approach this in different ways. The solid waste regulations prescribe a presumptive remedy for landfill closures consisting of an impermeable cap along with assessment of the landfill, whereas the MCP requires a thorough assessment of the landfill, including the source material and any contamination emanating from the cap and then development of a permanent solution. Another major difference in the two programs is that the Department provides direct oversight in each landfill closure, whereas under the MCP oversight is provided by an LSP except for the most contaminated sites. The Department's policy with regard to landfills is that landfills operating after 1971, when the solid waste regulations first went into effect, will be closed under the solid waste regulations, while those which stopped operating prior to 1971 will be closed under the MCP.

With regard to the use of contaminated soils for purposes of closing and capping old landfills, the use of these materials has made it both possible and cost-effective for a party to close a landfill that may not be closed properly due to the costs of the closure. Use of these materials has made it financially possible to close out old sites that have otherwise been abandoned. The Department believes this to be a very important consideration since, over the longer term, the environment will be well served by closures through reduction in leachate generation and other potential negative impacts.

Comment: Regarding landfill closure and remediation, two hybrid models are proposed:

- "on-landfill" activities should follow the solid waste regulations, while "off-landfill" response actions should be regulated by the MCP. This is problematic for a host of reasons. This would create a situation where an LSP would essentially be signing off on remedial actions conducted at the landfill while maintaining responsibility for oversight of "off-site" activities. If actions at the landfill, conducted under the solid waste regulations, were conducted by another professional or firm, it could create discrepancies. Since the landfill is the "source area", it is unclear how you would handle continuing source issues or requirements in the LSP regulations to "oversee" containment or removal actions. Also, it is unclear how to address Activity and Use Limitation (AUL) issues.
- The second would allow the transfer of closure/remediation activities at previously permitted landfills to the MCP. After that transfer, all activities would have to conform to one of the MCP phases and be overseen by an LSP. This model is supported by the LSPA, as it provides an opportunity for the landfill owner an option to "go private" and better control the timelines for remediation.

Response: The Department will further explore expanding the role of LSPs so they could conduct landfill closure work.

10. 19.142: Landfill Post-Closure Requirements

Comment: 19.142(5)(h) – Delete this proposed new requirement. It is an unnecessary additional cost that in many cases will have to be borne by communities.

Response: The Department believes it is appropriate to have closed landfills inspected by a third party and intends to keep this requirement. The Department does not anticipate that this inspection will be required more than once, or perhaps twice, a year so that the additional cost to the facility owner should not be excessive. The Department also intends to broaden the requirement to allow qualified professionals, other than only Registered Engineers, to conduct these inspections. It is hoped that such inspections will identify any problems developing at a site before they become very serious, allowing them to be corrected in an expeditious manner before they become more serious.

III. Handling Facility Design and Operations Standards

NOTE: The Department made modifications to 19.205 and 19.207 to eliminate redundant sections and reorder several paragraphs, including sections addressing equipment, bulky waste, weighing solid waste and record keeping.

1. 19.205: Handling Facility Design Requirements

(1) Storm Water Controls
Comment: Several comments were received on this issue.

The new storm water specifications for handling facilities should apply only to new facilities. Existing facilities should, however, be required to maintain their existing systems for enclosing waste handling areas at transfer stations and minimizing the discharge of pollutants. Existing transfer stations may not be able to implement the storm water controls specified by the regulation due to existing site conditions.

Response: These revised requirements for storm water control at handling facilities are applicable only to new facilities or when an existing facility requests a significant modification, such as a request to physically expand the existing facility. Also please see response to comment 19.115 above.

(2) Equipment
Comment: Operators of processing facilities should be allowed to modify the number and types of equipment utilized without applying for a "Major Modification" to a permit. A simplified procedure, without the assessment of application fees should be developed to handle simple equipment substitutions and trial periods. This would allow for the testing of recent developments in the equipment field to improve operating efficiencies without the time consuming process of a permit modification.

Response: The Department agrees that some types of modifications to a facility, such as certain types of equipment changes, do not need to go through a permit application and approval process. The existing regulations at 19.039(6) currently allow a facility operator to simply submit a letter notifying the Department of certain modifications.

(3) Weighing Facilities
Comment: The district does <u>not</u> support the revised language that appears to require all facilities to provide a mechanism for weighing refuse. Most small municipal transfer stations do not weigh refuse. The district recommends leaving the word "should" in this section until DEP can clarify its intent. This section would also refer to the language in 19.207(26) which indicates that only facilities receiving 100 tons per day or more need to weigh waste on a daily basis.

Response: The Department's preference is that all facilities have a mechanism for weighing the refuse they receive. However, the regulation as written allows "or measuring" and "other measuring devices" so weigh scales are not mandatory.

2. 19.206: Construction and Demolition (C&D) Waste Processing Facility Requirements

Comment: 19.206(a) – requires handling activities to occur indoors. The Department should clarify that this excludes receipt of non-regulated and/or clean materials, i.e. pallets, etc. The wording "indoors" should be changed to read "under cover". This requirement should allow for tipping within controlled areas with the provision that the materials are under cover within 24 hours. The Department should change the requirements of 19.206(b) by requiring all processed materials stockpiled to be stored in controlled areas.

19.206(b) – The draft regulations indicate that all processed C&D waste shall be covered. The district does not support this language because it is not practical or necessary for some inert wastes, such as clean wood waste, to be

covered. The district recommends that DEP strike the second sentence and allow waste to be stored in a manner appropriate for that specific material.

Response: The Department intends to retain the requirement for all C&D "waste" to be handled and processed indoors, but has added "unless otherwise exempted by the Department" to provide some flexibility on this issue where appropriate. For example, loads that contain only one type of certain materials, such as clean wood or metal, do not necessarily have to be handled (tipped, stored, etc.) indoors.

As written, 19.206(b) requires that processed C&D waste or recovered materials be stored in a manner appropriate for that material to protect public health, safety or the environment. Section 206(b) does not require covering all materials. The Department does not anticipate that clean wood would have to be covered.

3. 19.207: Handling Facility Operation and Maintenance Requirements

(1) General

Comment: This proposed new requirement should be deleted. It is too vague and open-ended to be of any practical use. There is literally no way to "prevent" noise, dust or odors from developing.

Response: Certainly the goal of these regulations, perhaps all environmental regulations, is to prevent pollution and/or nuisance conditions. This language has been in place in the landfill section of the regulations for 14 years and is intended to require operators to take all necessary, feasible actions to avoid nuisance conditions from being created.

(6) Posting of the Handling Facility

Comment: The district does not believe that it is necessary or practical for signs to include a 24-hour emergency phone number as all areas are serviced by 911. The district does not believe signs need to include penalties for unauthorized use as a requirement considering that some municipal facilities may not have such penalties written into their by-laws. The district recommends that DEP eliminate 19.207(6)(b) and (f).

Response: The proposed language will remain. DEP believes it is important to identify a 24-hour emergency number to contact the person best able to respond if there is a problem. In some cases, calling 911 may be appropriate, in others it may not.

To address the issue of penalties, the wording was modified as follows: "and, <u>where established by the municipality,</u> penalties for unauthorized use.

(10) Hazardous Waste

Comment: This section needs to clearly state an exception in reference to 19.207(24) and (25). This section literally excludes the collection of used oil or household hazardous waste at a handling facility, but sections (24) and (25) allow the collection of these wastes. The district recommends adding language to section (10) that identifies the exceptions listed in sections (24) and (25).

Comment: This section should be removed since the proposed "program approved by the Department" is already addressed by the waste ban provisions. The waste ban program establishes a program to detect and exclude recyclable and selected hazardous materials through loads inspections and load rejections in accordance with DEP guidance.

Response: The department intends to replace "subject to" with "in violation of". This should clarify the applicability of the hazardous waste regulations to activities at solid waste facilities.

Section 207(10) focuses on the need to have procedures in place to identify, remove and properly dispose of hazardous waste not allowed at solid waste facilities. This should be addressed separately from the activities proposed to comply with the waste bans at 19.017.

A reference will be added to section (10) that references any approvals granted under sections (24) and (25). Furthermore, (24) and (25) will be moved to follow (10).

(25) Household Hazardous Waste Collections at Handling Facilities

Comment: Covanta requests changes to the requirement to allow one-day Household Hazardous Waste Collection events without formal approval for each event. These events provide a very valuable service to the community and help the Department meet its goals to divert toxic wastes away from the waste stream for proper handling and recycling. In addition, during these events, waste collected is drummed and labeled that day with removal within that day or two. These events typically only occur two or three times per year.

Response: The regulations were modified to combine sections 24 and 25, move the paragraph to become section (11) and to require that household hazardous waste collections be consistent with the requirements of the appropriate sections of the hazardous waste regulations. Sections 310 CMR 30.392 and 30.393 of the hazardous waste regulations govern one day household hazardous waste events, which require no approval, and household hazardous waste centers, which do require an approval for activities except the collection of waste oil. One day events, pursuant to the hazardous waste regulations, do not require an approval as long as the event complies with the requirements of the hazardous waste regulations.

(26) Records for Operational and Plan Execution

Comment: Items (a) and (c) are not reasonable or practical for small municipal transfer stations that only accept residential waste. The district recommends that (a) only apply to facilities that handle 50 tons per day or more and to eliminate (c) completely as this information is supplied annually on the facility reports.

Response: The Department believes it is reasonable to require all solid waste facilities, regardless of their size, to record the type and quantities of waste received on a daily basis. (c) only requires this information be estimated on a daily basis, which can then be used to provide data for the annual report.

(30) Inspections

Comment: This requirement is completely impractical and unnecessary for small municipal transfer stations. The district recommends that DEP include a facility size of 100 tons per day or more to this section and thus exclude small facilities.

Please delete this section. There is no practical reason to have a registered PE perform site inspections of a transfer station. This only increases costs.

Response: The Department intends to retain the requirement for third party inspections of all solid waste management facilities. However, please note that flexibility is built into this requirement by providing that a qualified environmental professional, not only a registered Professional Engineer, can do the inspections. The frequency of such inspections will be determined by many factors, with size being an important consideration.

IV. Other Comments

Comment: Some facilities, specifically Wood Waste Reclamation Facilities, may not have been considered in the proposed amendments. Wood waste reclamation facilities are permitted and managed in accordance with Guidance Document BWP-98-006, which supplements and clarifies the provisions of 310 CMR 19.000 for these facilities. The proposed modifications appear to be aimed more specifically at solid waste landfill facilities. These facilities are open to the environment and stormwater (moisture) is an essential element in the composting process. Wood waste reclamation facilities are defined by the DEP as handling facilities, not landfills. Wood waste reclamation facilities may be better served under the proposed modifications to the Handling Facility Regulations. As such, the proposed provisions of 19.205(1) for Storm Water Control includes, "recharge shall not be induced at the handling facility, …" Somewhere, either within the proposed amendments or the Guidance Document BWP-98-006, wood waste reclamation facilities should be made exempt from this specific provision.

Response: The issue of recharge was addressed in previous responses regarding storm water controls wherein the Department said the prohibition on recharge will be eliminated.

Comment: Enforcement – A major concern about the new regulations is that they be uniformly and evenly enforced across the Commonwealth and within each region. With the reduced staffing in the Department this will

be a major challenge. However, the Department cannot and must not let disparities in interpretation or enforcement to even be suspected.

Response: The Department intends to maintain its current solid waste program activities, which include weekly and monthly meetings among DEP regional and headquarters staff to ensure, among other things, consistent interpretation and application of the solid waste regulations.

Comment: Although not directly related to the regulations, Ref-Fuel suggests that transfer stations be considered as equivalent to MSW disposal capacity in the context of managing the state need for capacity. Transfer stations are, in effect, equivalent to disposal capacity because as far as the State is concerned, the MSW is disposed. This would more accuretly reflect waste handling and movement within the state, as well as to address the no-net import-export policy with the present reality of waste handling. With the fluid movement of waste across state lines, and the volume of waste handled through transfer stations, the vast majority of waste is handled through this integrated system. Without the policy recognition, the Department will not be able to achieve an accurate reflection of waste handling, and be continually driven to report a capacity shortfall where none exists.

Response: The Department will continue to look at capacity in terms of disposal capacity. However, the Department agrees that transfer capacity is important in determining if all solid waste is managed effectively and appropriately. Further discussion of this issue will take place during re-evaluation of the Solid Waste Master Plan.